ER-1911S

SHARP SERVICE MANUAL

CODE: 00ZER1911SSME

ELECTRONIC CASH REGISTER

MODEL ER-1911S

SRV KEY: LKGIM7113RCZZ
PRINTER: UCR-802A

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PARTS GUIDE

Parts marked with "⚠" is important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

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The contents are subject to change without notice.

1. BLOCK DIAGRAM

ER-1911

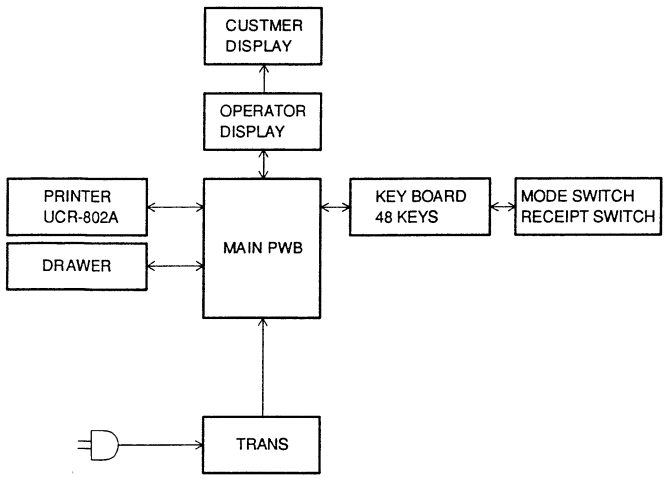


Fig. 1-1

2. SPECIFICATIONS

2-1. Appearance

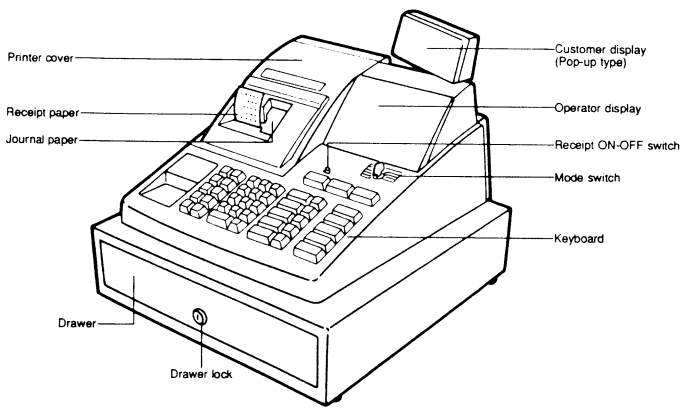


Fig. 2-1

2-2. Rating

[Specifications]

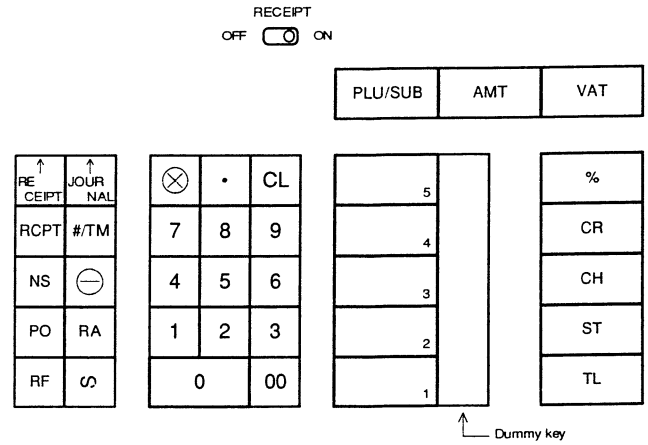
Power source	AC LOCAL VOLTAGE (±10%), 60Hz
Power consumption	ER-1911S: Stand-by 12W, Max. 36W
Ambient temperature, humidity	0 ~ 40°C 10 ~ 90°C
External dimensions (Including the drawer)	ER1911S for SK423 type drawer: 420 (W) x 426 (D) x 288 (H) ER1911S for SK460 type drawer: 445 (W) x 463 (D) x 294 (H)
Weight	ER-1911S for SK423 type drawer: 13.2 kg ER-1911S for SK460 type drawer: 14.5 kg

2-3. Keyboard

(1) Standard key layout

ER-1911S

① For Germany



② For U.K and Australia

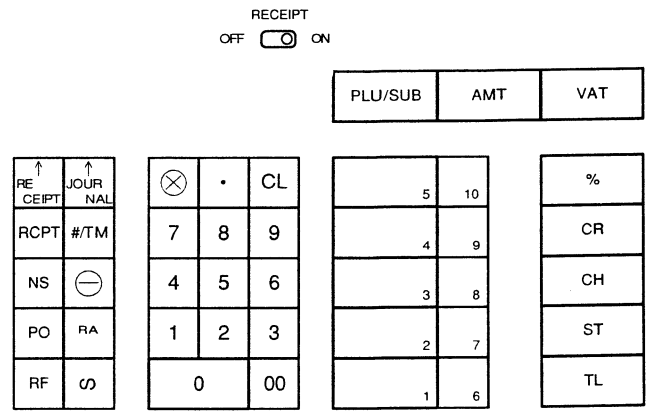


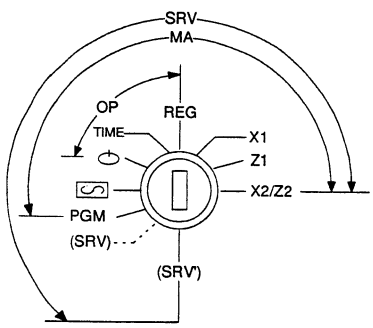
Fig. 2-2

(2) Key top name

[0] [00] ~ [9] : Numeric keys
[•] : Decimal point key
[CL] : Clear key
[⊗] : Multiplication key
[∞] : Void key
[RF] : Refund key
[RA] : Received on account key
[PO] : Paid out key
[⊖] : Discount key
[NS] : No sale key
[#/TM] : Non-add code/Time key
[RCPT] : Receipt print key
[↑ RECEIPT] [↑ JOURNAL] : Paper feed keys (Receipt & Journal)
[AMT] : Amount key
[VAT] : Value add tax key
[CH] : Check key
[ST] : Subtotal key
[TL] : Cash amount tender key
[PLU/SUB] : PLU/SUB dept. code entry key
[1] ~ [10] : Department keys
[%] : Percent key
[CR] : Charge key

2-4. Mode switch

① ER-1911S



Note: 1. The key can be removed in the REG or OFF position.
2. Service mode is not prompted on the display.

[Mode switch positions]

SRV': Service mode (To reset Program roop)
SRV: Service mode (SRV programming)
PGM: Program mode
∞: Void mode
⏻ : Power off mode (AC power remains on)
TIME: Time mode (Allows time display)
OP X/Z: Clerk sales reading and resetting mode
REG: Registration mode
X_1: Reading of daily sales (X report)
Z_1: Resetting of daily sales (Z report)
X_2/Z_2: Reading and resetting of any periodic sales totals

[Mode select keys]

SRV: Service keys: LKGIM7113RCZZ
MA: Manager key: LKGIM7110RCZZ
OP: Operator key: LKGIM7111RCZZ

NOTE: SRV key is not included in the accessories. (Supplied as service parts.)

2-5. Display

1) Front display (Operator display)

① Display device
- 9 digits
- 7 segment type (Green color)
- Character size: 10 mm (H) × 4.5 mm (W)

② Layout

ER-1911S

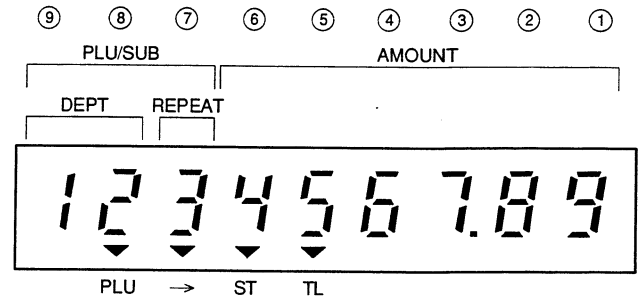


Fig. 2-3

2) Rear display (Customer display [Pop-up type])

① Display device
- 9 digits
- 7 segment type (Green color)
- Character size: 10 mm (H) × 4.5 mm (W)

② Layout

ER-1911S

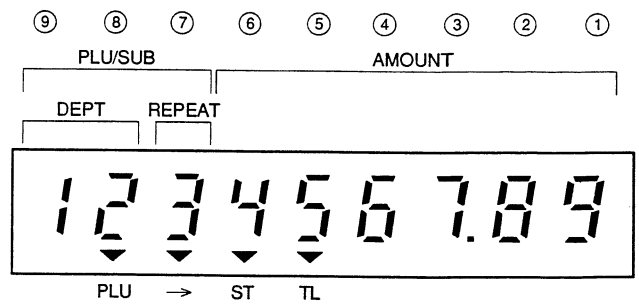


Fig. 2-4

3) Usage of the digits

Display	No. of Digits	Used Digits	Pattern
Numeric number	Max. 7	1 ~ 7	"0 123456 789"
Symbol		4 ~ 8	"-" Minus sale registrations
		9	"E" error
		9	"P" program mode
		9	"S" Sub-total or short tender
		9	"C" Sub-total in conversion
Decimal point		3	TAB
Dept. No.		8 ~ 9	Zero-suppressed
PLU. No.		7 ~ 9	Zero-suppressed
Repeat		7	Endless count, starting from 2
Time		1 ~ 7	"A 10-25"
Sentinel		9	When the CiD amount exceeds a programmed amount, "." lights up

4) Indicator lamps

Lamp	Meaning
PLU	Lights up when a PLU entry is made.
→	Lights up when the change due amount is displayed.
ST	Lights up when the subtotal is displayed.
TL	Lights up when direct finalization is made.

2-6. Printer UCR-802A (ER-1911S)

(1) Printer

1. Printing system : Print wheel selective type 2 sheets
2. Print column : 20 char. in total
   (1) Journal side : 10
   (2) Receipt side : 10
3. Dimensions of printing character (mm) : Oridinary type 1.7(W) × 3.2(H) mm
   Large type 2.4(W) × 3.2(H) mm
   Spacing 3.35 mm Between 1st and 2nd column
   3 mm After 3rd column
   5.1 mm Between lines
4. Printing speed : Approx. 2.6 lines/sec.
5. Paper feed : Approx. 18 lines/sec.
   (Receipt issue quick feed)
6. Functions : (1) Stamping
   (2) Receipt ON-OFF and Journal select
   (3) Individual R/J paper feeding
7. Roll paper : 44.5±0.5mm (W)
   83ϕ mm (Max. Diameter)
   (DPAPR1006CSZZ)
8. Paper quality : 0.06 ~ 0.09mm (Thickness)
   52.3 ~ 64.0g/m^2
9. Reliability : MCBF 2 million lines
10. Ink roller : NROLR6638RCZZ
    Color Purple
    Life 0.6 millon lines

(2) Logo stamp

Type	Porous rubber
Stamp colour	Purple alone
Max. printable size	30(W) × 20(H) Stamp face 20(.787") 30 (1.18") .mm
Stamp pattern (standard)	One of the following is provided as standard depending on the destination: VIELEN DANK, THANK YOU, MERCI, MUCHAS GRACIAS, DANK U, TACK, THANK YOU/DANKIE.
Replenishment ink	UiNK-1001CCZZ (For stamp only)

(3) Print wheel layout

Part code : 00BM712002250
Price rank : BK

	10	9	8	7	6	5	4	3	2	1
0	PL	Z	TX	•	•	•	•	GT	CA	@
1	–	–	–	–	–	–	–	#	CH	1
2	★	★	★	★	★	★	★	%	CR	2
3										
4	0	0	0	0	0	0	0	0	A	←
5	1	1	1	1	1	1	1	1	B	→
6	2	2	2	2	2	2	2	2	D	◀
7	3	3	3	3	3	3	3	3	E	▶
8	4	4	4	4	4	4	4	4	TX	ST
9	5	5	5	5	5	5	5	5	T	TL
10	6	6	6	6	6	6	6	6	⊖	Q
11	7	7	7	7	7	7	7	7	X	∞
12	8	8	8	8	8	8	8	8	EX	NS
13	9	9	9	9	9	9	9	9	RF	⊠

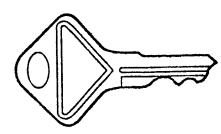
Fig. 2-5

2-7. Drawer/Lock

(1) Drawer

- Metallic drawer
- Drawer lock key
  (LKGiM7331BHZZ)
  Lock: 90° counterclockwise
  Unlock: 90° clockwise

■ Drawer lock key



(2) Basic specification for drawers

① ER-1911S

Specs. \ *Country	Europe U.K	Australia
Type name	SK423	SK460
No. of compartments	4B/8C	4B/8C
Bill separator	○	○
Con sub case	—	—
Drawer open sensor	○	○
Bell	△	△

○: Standard
△: Optionally available
—: Not available

(COMPARTMENT LAYOUTS)

4B/8C

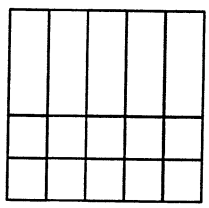


Fig. 2-6

2-8. Functional Differences

Function	ER-1911S
No. of departments (Standard)	5 (Germany), 10 (U.K, Australia)
No. of departments (Max)	15
Cashier keys	NO
No. of charge keys	1
No. of percent keys	1
Validation printing function	NO
Additional drawers (option)	NO
Reporting function:	
Individual cashier records	NO
All cashier records	NO
Hourly sales records	YES
ALL PLU-basis sales records	YES
Partial PLU-basis sales records	YES
Sales records on all items	YES
Periodic consolidated records of daily net sales	YES
Periodic consolidated records on all items	YES
Department share printing	YES

3. SPECIAL SERVICE TOOLS

No.	Parts code	Price	Description
1	LKGiM7113RCZZ	AK	Service key
2	UKOG-6634RCZZ	AX	Key top remover
3	UKOG-6678RCZZ	AX	Printer and Trans extension cable
4	UKOG-6679RC22	AG	Keyboard extension cable (22 pin) for ER-1911S

4. OPTIONS

4-1. Options

1) For ER-1911S

No.	NAME	MODEL NAME	COUNTRY			NOTES
			Germany	U.K	Australia	
1	Coin case	ER-48CC2	O —	O —	— —	
2	Coin case cover	ER-01CV1~5	O —	O —	— —	
3	Key top kit	ER-11KT6 ER-12KT6 ER-22KT6 ER-11DK6 ER-51DK6	O O O O O	O O O O O	O O O O O	1 x 1 key top 1 x 2 key top 2 x 2 key top 1 x 1 Dummy key 1 x 5 Dummy key

4-2. Service options

No.	NAME	PARTS CODE	MODEL	DESCRIPTION
			ER-1911	
1	Drawer fixing kit	DKiT-8633RCZZ	O	
2	Shield plate kit	DKiT-3381RCZZ	O	ER-1911 the bottom cabinet (GCABA7081RCZZ) required.
3	SRV key	LKGiM7113RCZZ	O	Service key
4	Key cover	GCOVB6985RCZZ	O	
5	Drive PWB connection cable 1	QCNCW6922RC03	—	
6	Drive PWB connection cable 2	QCNCW6922RC04	—	
7	OP key grip cover	LKGiM7126RCZZ	O	
8	Sub master key	LKGiM7129RCZZ	O	
9	Drawer bell kit	DKiT-8324RCZZ	O	
10	4-pin connector cable	QCNCW6922RC03	—	
11	5-pin connector cable	QCNCW6922RC04	—	

4-3. Supplies

No.	NAME	PARTS CODE	DESCRIPTION
1	Ink	UiNK-1001CCZZ	5 cc
2	Ink roller	NROLR6638RCZZ	Purple
3	Roll paper	DPAPR1006CSZZ	5 rolls

5. REFERENCE DOCUMENTS

No.	Description	Manual code
1	ER-1911S/ER-2386S Instruction manual	00ZER1911SiME
2	ER-1911S Programming manual	00ZER1911SPME
3	UCR-802A/812A Parts guide	00ZUCR812APGE

6. TEST FUNCTION

6-1. Start of test function

The following key operation is required in the SRV1 mode to start the test.

XXXX → [RF]
Test command

[RF] key: ER-1911S

6-2. List of test command

No.	Description	Key operation
1	Mode switch test	1 → [RF]
2	Key test	XXX02 → [RF]
3	Display test	3 → [RF]
4	Buzzer test	4 → [RF]
5	Receipt ON/OFF switch test	5 → [RF]
6	Drawer open test (with option installed)	6 → [RF]
7	Printer test	7 → [RF]
8	RAM test	8 → [RF]
9	Key position code test	9 → [RF]
10	Sequential test	XXX11 → [RF]

XXX: Sum check data for standard key layout
ER-1911S (5DEPT.) = 22
ER-1911S (10DEPT.) = 213

6-3. Test description

1) Test No.1: Mode switch test

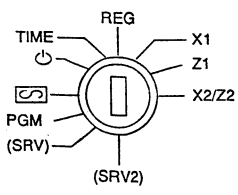
① Key operation

1 → [RF]

Then, turn the mode switches in the following order.

Mode switch operation	Display
SRV1	: 1
PGM	: 2
∞	: 3
⏻	
TIME	: 4
REG	: 5
X	: 6
Z	: 7
X2/Z2	: 8

Mode switch position layout
For ER-1911S



② Description
As the mode switch position number is displayed, check the number.

③ Termination
The mode can be terminated when the mode switch is turned to the SRV1 side from other position.

Termination print : 1
Error print : ------- 1E

2) Test No.2: Key test

① Key operation

XXXX 02 → [RF]
Test command
Sum check data

Enter the test command in succession to the sum check data of the model.

Mode1	Sum check data
ER-1911S: 5DEPT.	22*
ER-1911S: 10DEPT.	213*

* NOTE: Sum check data

The checksum is a decimal number obtained by converting low two digits of the hard code hexadecimal total of all keys.
The [TL] keys are exception.

- Next, push every key on the keyboard except for the receipt and journal keys.
  When the [TL] key is depressed, the termination printout is immediately produced assuming that all keys have been depressed.
  There is no order in which the keys have to be depressed.
- Keyboard position code of model vs. key layout

[All key position code]

	A2	12	04	02	03

↑ R	↑ J	41	42	72	A3	32	14	02	01
43	44	92	82	73	A4	B2	13	03	22
54	53	93	83	74	A1	B4	34	11	24
52	63	81	94	84	71	B3	33		23
51	62		61	64	91	B1	31		21

[ER-1911S]
5 DEPT.

A2	12	02

↑ R	↑ J	41	42	72	32	01
43	44	92	82	73	B2	22
54	53	93	83	74	B4	24
52	63	81	94	84	B3	23
51	62		61	64	B1	TL

10 DEPT.

A2	12	02

↑ R	↑ J
43	44
54	53
52	63
51	62

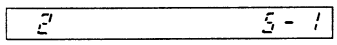
41	42	72
92	82	73
93	83	74
81	94	84
	61	64

32	14
B2	13
B4	34
B3	33
B1	31

01
22
24
23
TL

② Description
Until the depression of the [TL] key, the sum of key position codes is compared with the sum check data, except for the [TL] key.

③ Display



- Display the hard code of the key pressed.
- High and low digits of the hard code are separated with a hyphen "-".
- If the hard code value is A or B, it will be converted into decimal equivalent and displayed.
  A → 10
  B → 11

④ Termination
The test terminates with the depression of the [TL] or [CA/AT] key and the termination printout is produced.

Termination print : | 2 |
Error print : | -------- 2E |

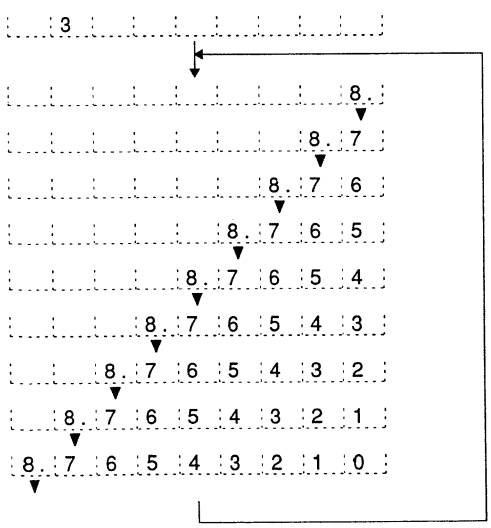
3) Display test

① Key operation

3 → RF

② Description
The display pattern is kept displayed in the given interval after the test mode was established.
Press any key to cancel the test mode. In this event, the display returns to the initial message display.

- Display



③ Termination print : | 3 |

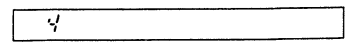
4) Test No.4: Buzzer test

① Key operation

4 → RF

② A continuous beep will be issued when in this mode. Press any key to cancel the test mode. The beeper will then be turned off.

- Display



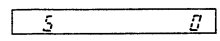
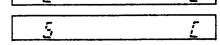
③ Termination print : | 4 |

5) Test No.5: Receipt ON/OFF test

① Key operation

5 → RF

② Description
The following is displayed according to the location of the receipt on/off switch.

Display:  Receipt on (contacts open)
 Receipt off (contacts closed)

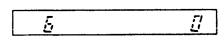
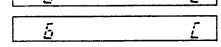
③ Termination
With depression of any key.
Print out: | 5 |

6) Test No.6: Drawer open test

① Key operation

6 → RF

② Description
With this test, the drawer opens and its state is displayed in the following manner.

Display:  Drawer open
 Drawer close

For the model with the drawer open sensor, check that the display shows "O" when the drawer opens, and "C" when it closes.
For the model without the drawer open sensor, check that the display always shows "C".

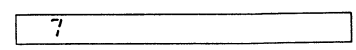
③ Termination
With depression of any key.
Print out: | 6 |

7) Test No.7: Printer test

① Key operation

7 → RF

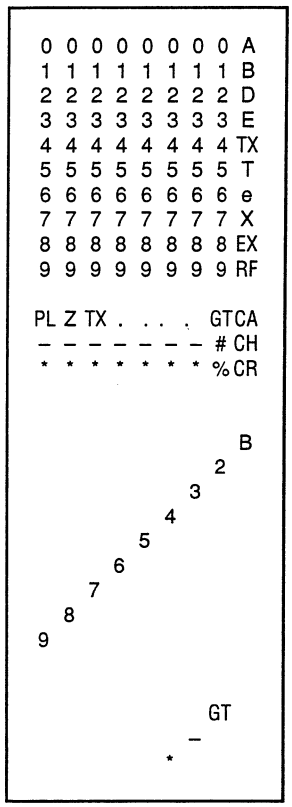
② Description
Receipt switch in the position OFF: Continuous printing is done.
Receipt switch in the position ON: After a cycle of printing, the operation terminates automatically.

Display: 

③ Termination
When the receipt switch is turned from OFF to ON position while printing is continuing, the test terminates after a cycle of printing.

[A continuous print example]

ER-1911S



8) Test No.8: RAM test

① Key operation

8 → RF

② Description

After writing the following data in the RAM, the data is check by reading the RAM.

If an error occurs, the operation ends with the termination error printout.

The application will handle it as address 0000H~3FFFH and 4-bit data by the handler and converted to the address 0000H~1FFFH and 8-bit data.

NOTE: The data in the RAM is cleared by this test.
Perform a master reset function after this test is completed.

Adderss vs. data

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
001X	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
002X	F	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E
004X	E	F	0	1	2	3	4	5	6	7	8	9	A	B	C	D
008X	D	E	F	0	1	2	3	4	5	6	7	8	9	A	B	C
010X	C	D	E	F	0	1	2	3	4	5	6	7	8	9	A	B
020X	B	C	D	E	F	0	1	2	3	4	5	6	7	8	9	A
040X	A	B	C	D	E	F	0	1	2	3	4	5	6	7	8	9
080X	9	A	B	C	D	E	F	0	1	2	3	4	5	6	7	8
100X	8	9	A	B	C	D	E	F	0	1	2	3	4	5	6	7
200X	7	8	9	A	B	C	D	E	F	0	1	2	3	4	5	6

The write data to other address will be 0.

Display: 8

③ Termination

8		-------- 8E
Normal termination print out		Error print out

9) Test No.9: Key position code test

① Key operation

9 → RF

② Description

Shows the hard code of the key pressed, except for the TL key. Press the TL key to cancel this test mode.

- Display

9 5-1 Indicates the hard code of the key depressed.

High and low digits of the hard code are separated with a hyphen "-".

If the hard code value is A or B, it will be converted in to decimal equivalent and displayed.

③ Termination

Print out: 9

10) Test No.10: Sequential test

① Key operation

XXX 10 → RF

XXX: Sum check data

② Description

Checksum for the keyboard test is similar as the Job#02, is a decimal number obtained by converting low two digits of the hard code hexadecimal total of all keys.

With this test, test items 1~8 are executed in succession. The basic print pattern, however, is used for the printer aging test of Item 7.

The basic print pattern will be printed just for once, regardless of the receipt switch position.

Termination print (or error print) will be obtained every time a test has completed before going to a next test.

After completion of the test item 8, the stamp is printed and a receipt is issued and the sequential test terminates.

Key operation, display, and printout of tests

No.	Test	Key operation	Display	Print (normal pattern)	Note
1	Mode switch	Mode switch ≀ SRV1	1 1 1 2 ≀ 1 8	1	
2	Key	Key entry TL key	2 4 – 3	2	
3	Display	 (Any key)	3 8 8 7 8 7 6 ≀ 8 7 6 5 4 3 2 1 8 7 6 5 4 3 2 1 0	3	The display pattern will continue until a key is pressed.
4	Beeper	 (Any key)	4	4	Beep Beep stop
5	Receipt ON/OFF	 (Any key)	5 O 5 C	5	Receipt issue active Receipt issue not active
6	Drawer open	 (Drawer close) (Any key)	6 O 6 C	6	Drawer open NOTE: Drawer open sensor kit must be installed.
7	Print		7	0 1 2 3 4 5 6 7 EX⊘ 9 8 7 6 5 4 3 2 B←	ER-1911S
8	RAM		8	8	
—				(Stamp printed and receipt issued)	

③ Termination
All tests automatically terminate open finishing the stamp test.

7. CIRCUIT DESCRIPTION

Circuit block diagram

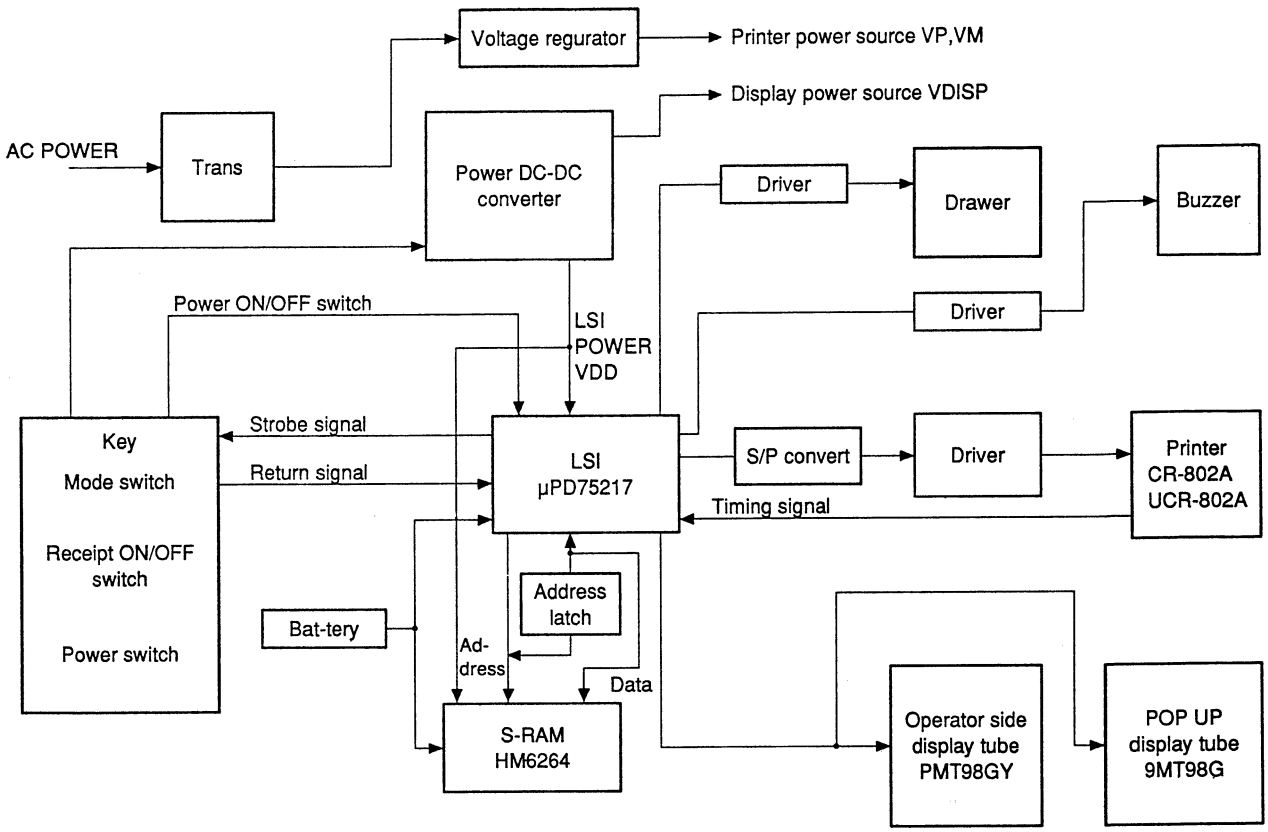


Fig. 7-1

7-1. μPD75217 Terminal signal

No.	Name	Description	I/O
1	S3	Key strobe/Display tube segment signal (d)	out
2	S2	Key strobe/Display tube segment signal (c)	out
3	S1	Key strobe/Display tube segment signal (b)	out
4	S0	Key strobe/Display tube segment signal (a)	out
5	P00	Power off signal	in
6	P01	Print data shift clock output	out
7	P02	Print data output	out
8	P03	Key return signal	in
9	α	Printer timing signal input	in
10	P11	Key return signal	in
11	P12	Key return signal	in
12	P13	Key return signal	in
13	-CS1	RAM chip select signal	out
14	-WE	RAM write signal	out
15	P22	Printer motor on signal	out
16	P23	Drawer open signal	out
17	P30	Mode switch return	in
18	P31	Key return signal	in
19	P32	Address latch enable for RAM	out
20	A12	RAM Address bus A12	out
21	A8	RAM Address bus A8	out
22	A9	RAM Address bus A9	out
23	A11	RAM Address bus A11	out
24	A10	RAM Address bus A10	out
25	D7/A0	Data bus D2/Address bus A0	in/out
26	D6/A1	Data bus D1/Address bus A1	in/out
27	D5/A4	Data bus D0/Address bus A4	in/out
28	D4/A2	Data bus D7/Address bus A2	in/out
29	PP0	Buzzer signal	out
30	X1	X'tal terminal 4.19MHz	in
31	X2	X'tal terminal 4.19MHz	in
32	VSS	GND	in
33	XT1	Timer X'tal terminal 32.768KHz	in
34	XT2	Timer X'tal terminal 32.768KHz	in
35	D0/A7	Data bus D0/Address bus A7	in/out
36	D1/A6	Data bus D1/Address bus A6	in/out
37	D2/A5	Data bus D2/Address bus A5	in/out
38	D3/A3	Data bus D3/Address bus A3	in/out
39	-RESET	Reset signal input	in
40	T0	Display tube 1st digit drive signal	out
41	T1	Display tube 2nd digit drive signal	out
42	T2	Display tube 3rd digit drive signal	out
43	T3	Display tube 4th digit drive signal	out
44	T4	Display tube 5th digit drive signal	out
45	T5	Display tube 6th digit drive signal	out
46	T6	Display tube 7th digit drive signal	out
47	T7	Display tube 8th digit drive signal	out
48	T8	Display tube 9th digit drive signal	out
49	T9	NU	
50	PH3	NU	
51	PH2	NU	
52	PH1	Printer magnet data output enable signal	out
53	PH0	Printer magnet data strobe signal	out
54	S11	Key strobe signal	out
55	S10	Key strobe signal	out
56	Vload	Power (-20V) for display	in
57	Vpre	Power (-4V) for display	in
58	S9	Key strobe signal	out
59	S8	Key strobe signal, Display tube segment (▼)	out
60	S7	Key strobe/Display tube segment (DP) signal	out
61	S6	Key strobe/Display tube segment signal (g)	out
62	S5	Key strobe/Display tube segment signal (f)	out
63	S4	Key strobe/Display tube segment signal (e)	out
64	VDD	Power (+5V)	in

7-2. Circuit description

(1) RAM Read/write circuit

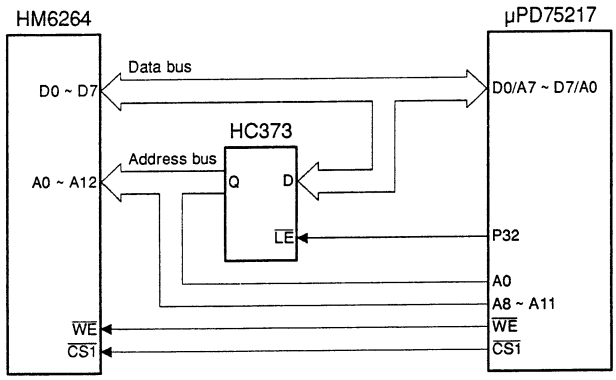
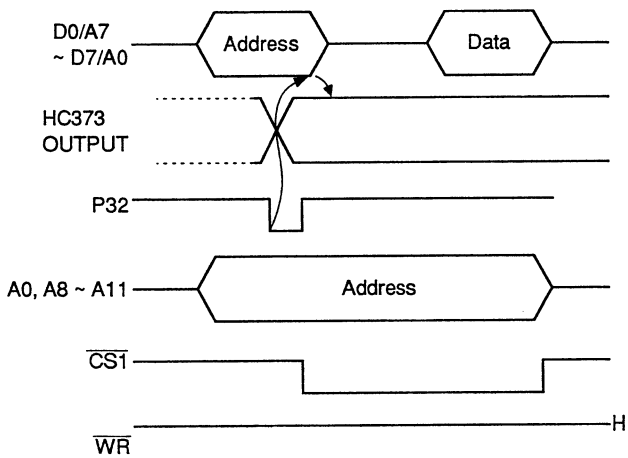
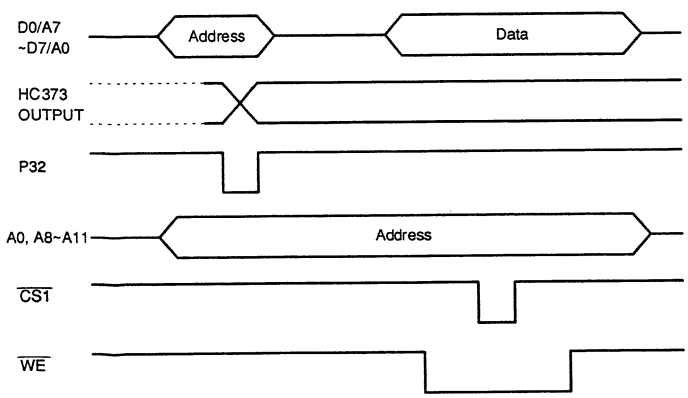


Fig. 7-2

Since the 8-bit data bus of the μPD75217 shares the same lines with the 8-bit address bus of the HM6264, selection of the RAM chip by the μPD75217 causes the HC373 to latch the 8-bit address when P32 of μPD75217 is inputted.



RAM data read timing



RAM data write timing

(2) Battery circuit

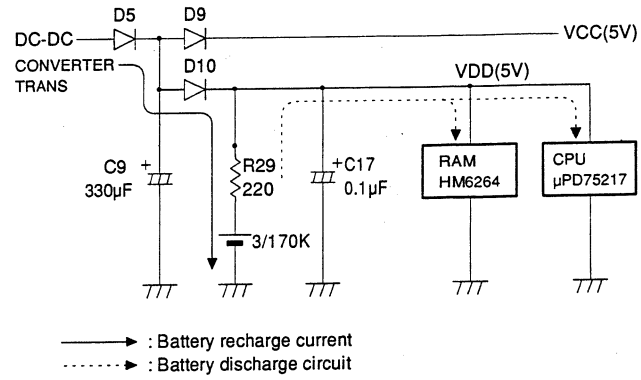


Fig. 7-3

(3) P-OFF circuit

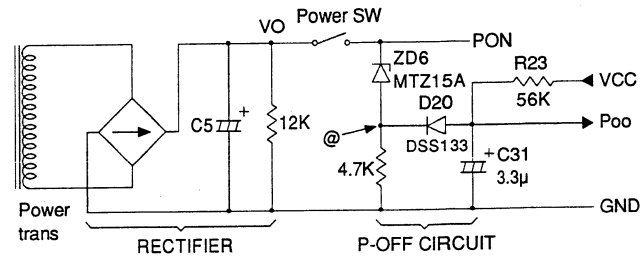


Fig. 7-4

At power on

When P-ON voltage reaches 16V, the current flows through the zener diode (MTZ15A) so that the level at point @ goes high.
The level of P-OFF rises as VCC increases. As a result, the P-OFF signal changes from low to high level.

At power off

When the power is turned off, the P-ON voltage drops under 15V causing the zener diode to stop current flow, which causes potential at point @ to drop.

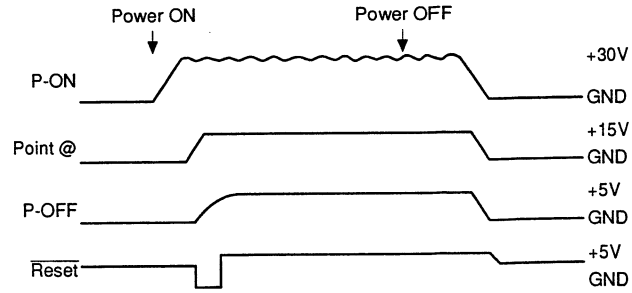


Fig. 7-5

(4) Key and switch

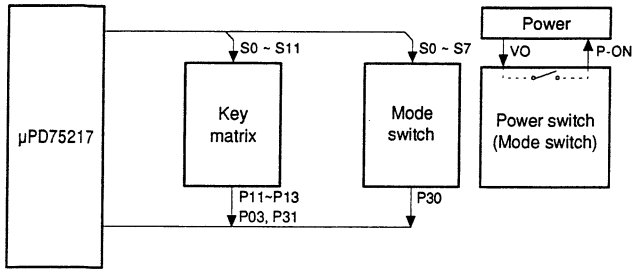


Fig. 7-6

S0 ~ S11	: Key scan signal
P11 ~ P13, P03, P31	: Key return signal
V0	: Power switch
P-ON	: Mode switch
P30	: Mode switch return signal

(5) Display control

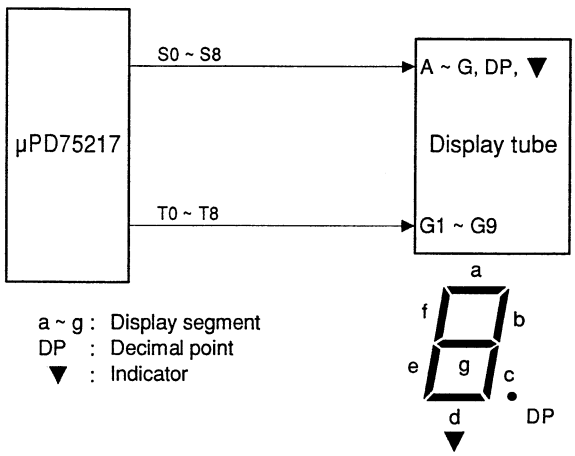


Fig. 7-7

(6) Printer control

Block diagram

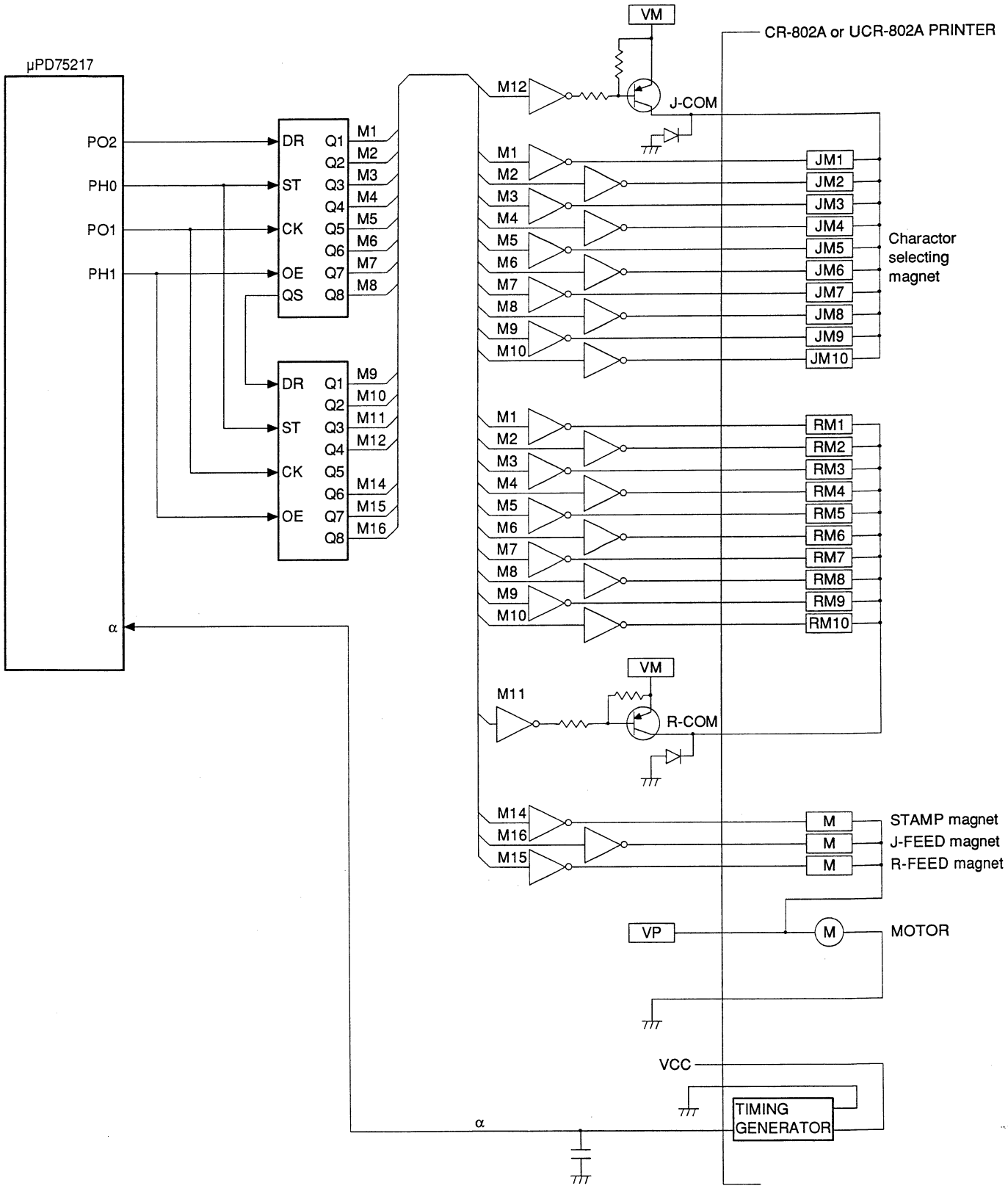


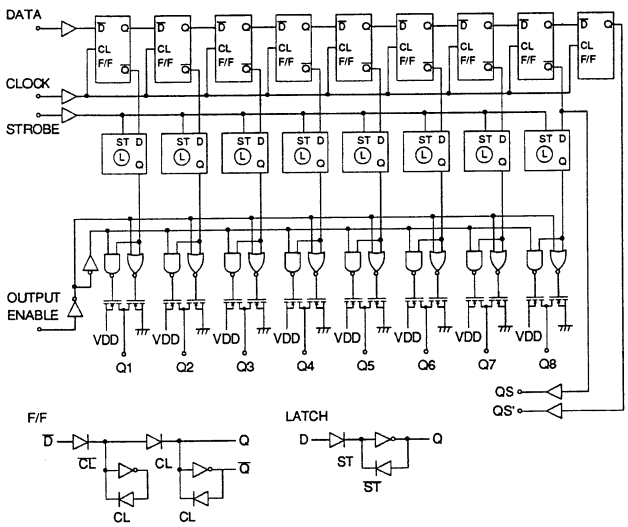
Fig. 7-8

PO2 : Print data output (serial output)
PO1 : Print data shift clock
PH0 : Printer magnet data strobe signal
PH1 : Printer magnet data output enable signal
M1
~ : Printer magnet drive signal
M10
VP : Printer power
α : Printer timing signal
M11 : Receipt side magnet common
M12 : Journal side magnet common
M14 : STAMP drive
M15 : Receipt feed
M16 : Journal feed

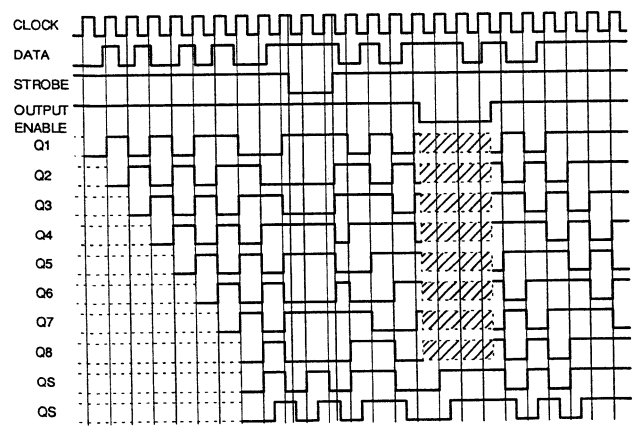
Printer control procedure

Printer is controlled mainly with CPU signals PH0, PH1, PO1, PO2, α, and P22.

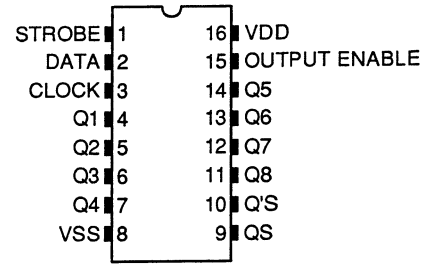
1) Make P22 high to drive the motor with the CPU. This activates VP to rotate the printer motor.
2) α (Timing Signal) from the printer allows output of the first line print data.
3) Print data is outputted serial-parallel converted in TC4094 and internally latched by the strobe signal of PH0.
When PH1 output enable signal is inputted. The latched data is outputted as M1~M16.
4) The next α is detected and procedure 3) is repeated.



TIMING



TC4094 internal circuit



(TOP VIEW)

(7) Printer motor drive circuit

BLOCK diagram

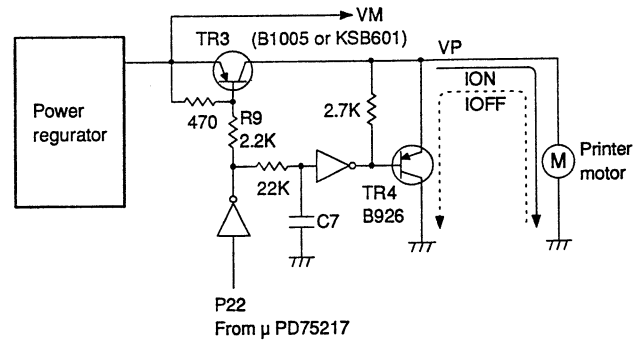


Fig. 7-9

A high on P22 of the μPD75217 makes TR3 active and TR4 inactive so that current flows through the motor to run. On the other hand, a low on P22 turns off TR3 and turns on TR4 stop the motor.

(8) Drawer control

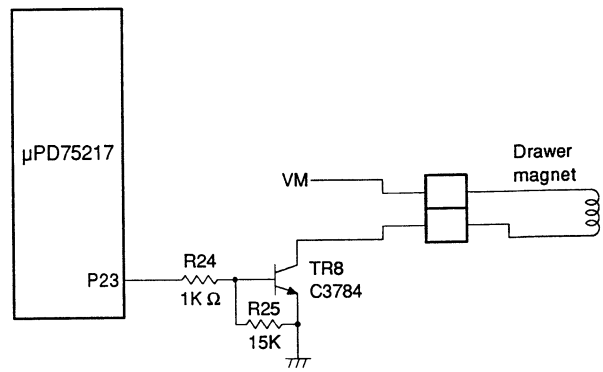


Fig. 7-10

The drawer magnet is driven when P23 of the μPD75217 changes from low to high state.

(9) Power circuit

1) Block diagram

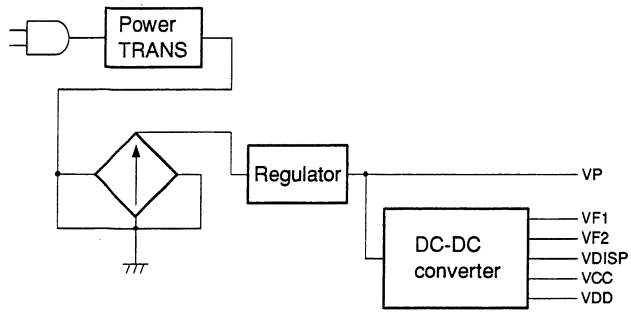
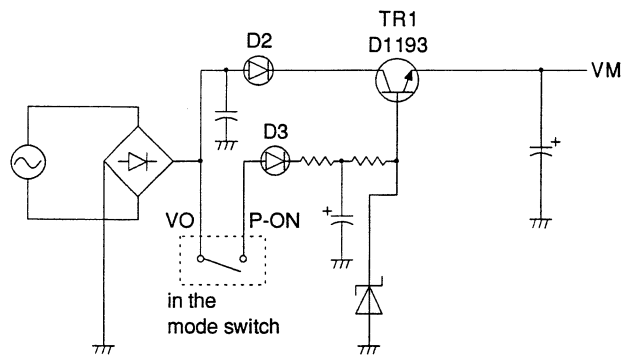


Fig. 7-11

VP : +20V
VF1, VF2 : –4.3V AC
VDISP : –25V
VCC : +5V
VDD : +5V

2) Regulator circuit



Flg. 7-12

1) If VO-P-ON was not shorted within the mode switch (power off), TR1 remains inactive as no voltage is applied to the base of TR1.
2) If VO-P-ON was shorted, TR1 goes active as voltage is added to the base of TR1.
3) With activation of TR1, the voltage VM begins to increase.

3) DC-DC converter

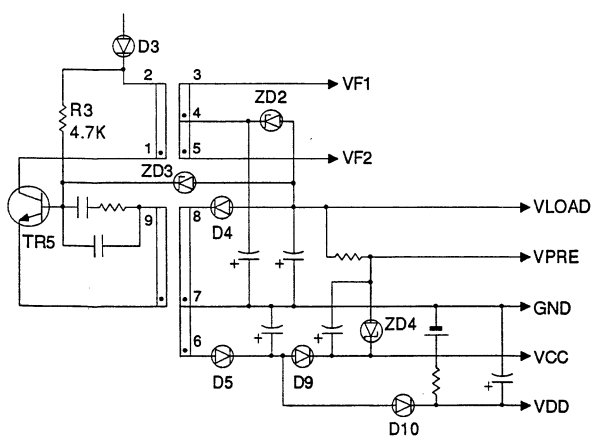
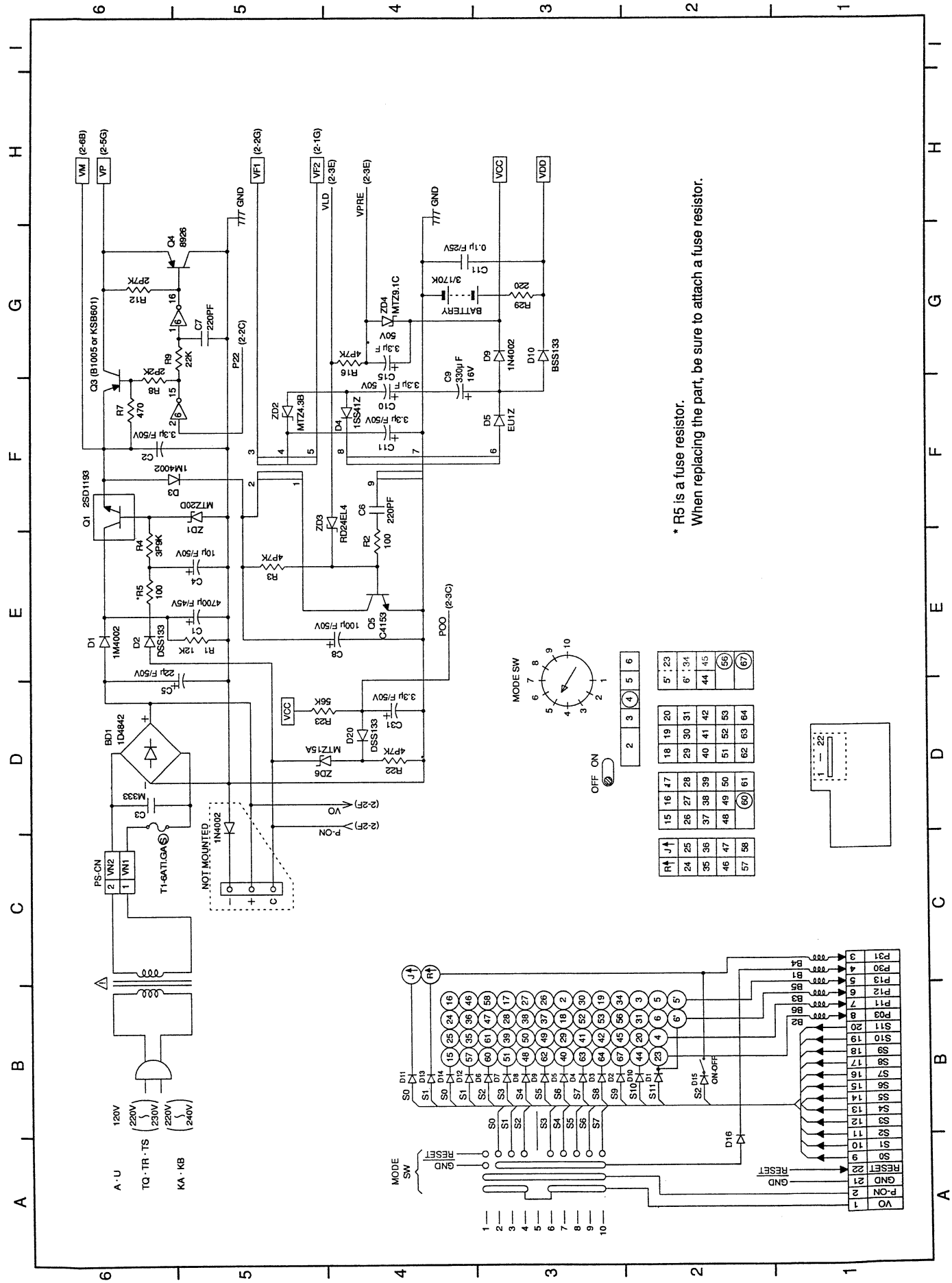
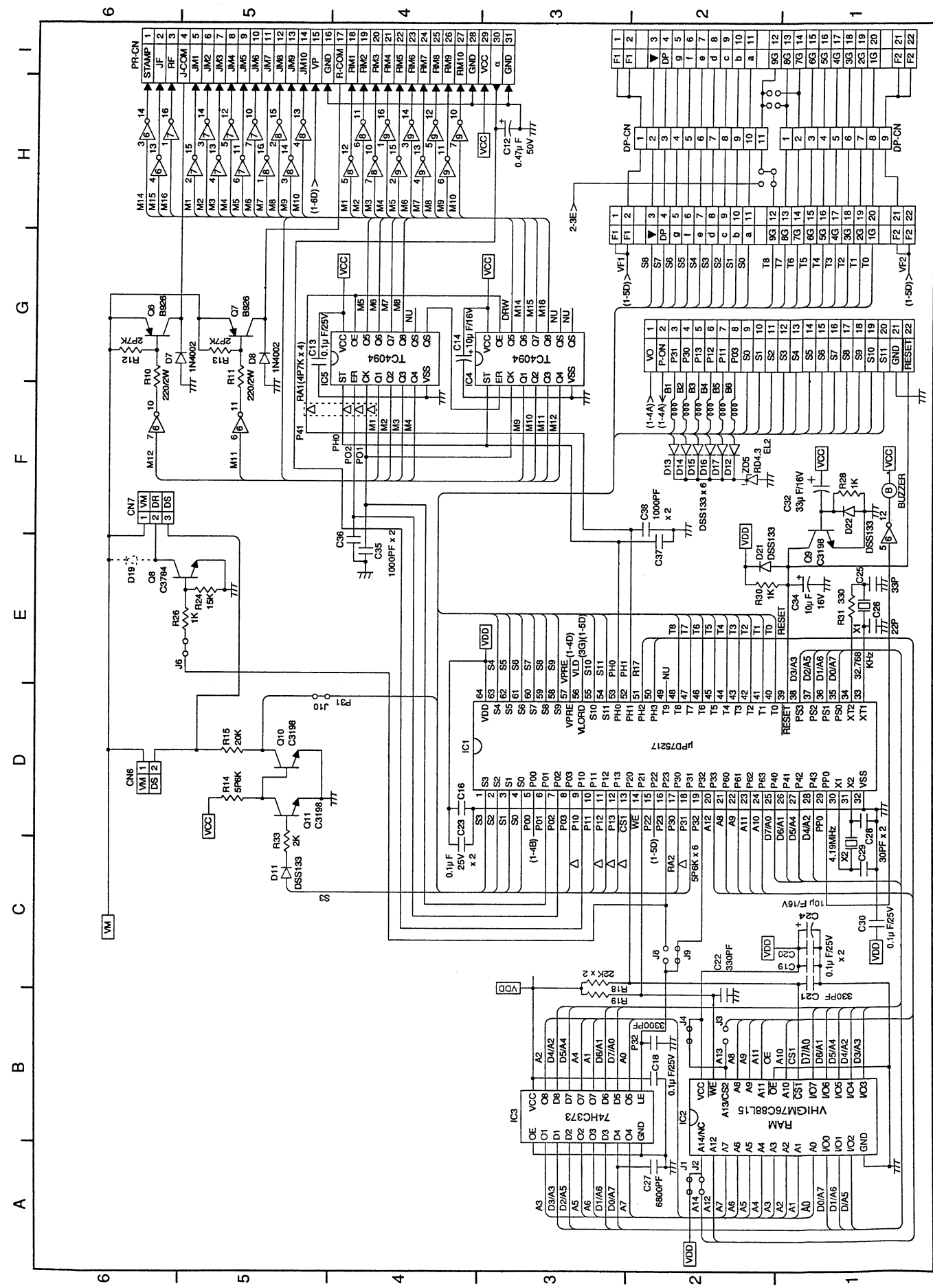


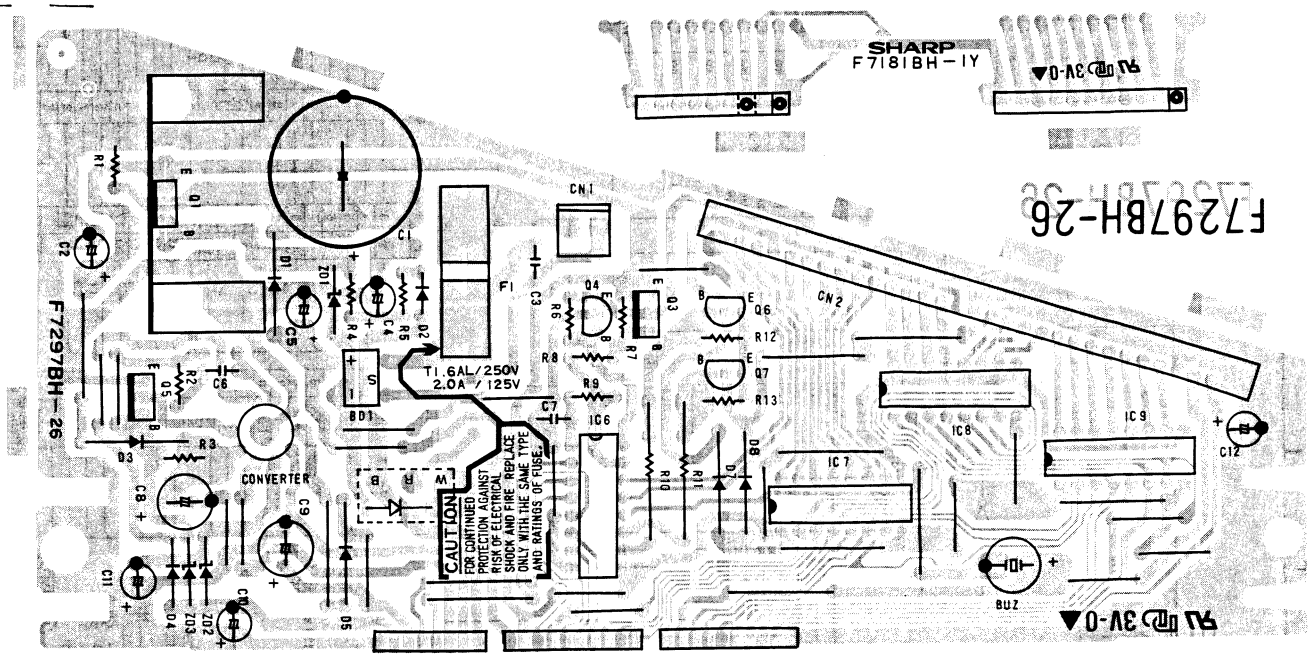
Fig. 7-13

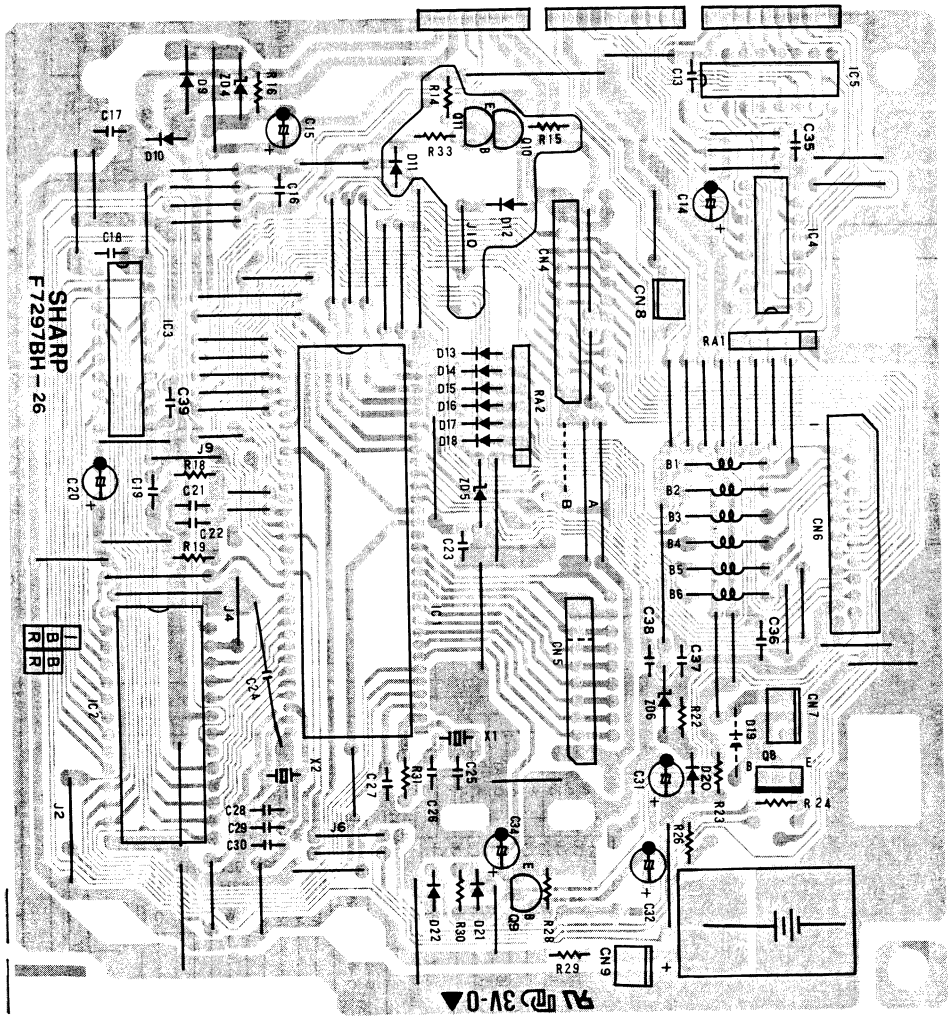
The bias is added to the base of TR5 when the power switch is turned on, so that TR5 starts self-oscillation. VLOAD from the secondary side is fed back through the zener diode ZD3 to suppress voltage fluctuation on the secondary side.

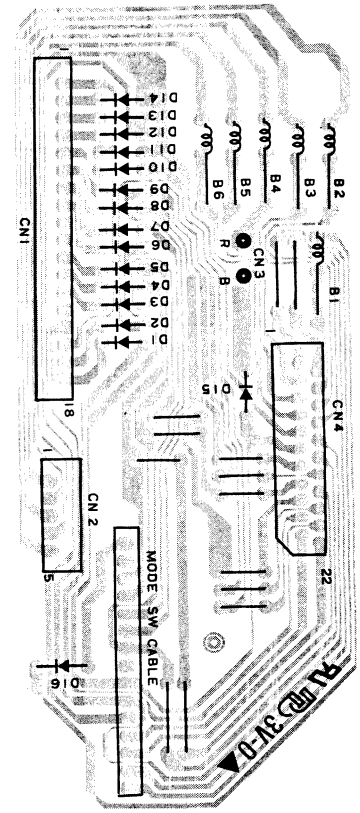
8. CIRCUIT DIAGRAM AND PARTS LAYOUT











SHARP
F7298BH-26

SHARP PARTS GUIDE

MODEL ER-1911S

PRINTER: UCR802A
(for KA, KB, TQ, TR, TS)

CONTENTS

1 Exteriors

2 Keyboard unit

3 Packing material & Accessories

4 Drawer box unit
(SK460 type) [KA only]
(SK423 type) [except KA]

5 Main PWB unit

6 Key I/F PWB unit

7 Pop-up PWB unit

8 Articles for consumption

9 Service route options

10 AC cord

■ Index

Because parts marked with "⚠" is indispensable for the machine safety maintenance and operation, it must be replaced with the parts specific to the product specification.

Table of destinations

SELECTION CODE	COUNTRIES
U	U. S. A., Guam
A	Canada
TS	Germany
TQ	SEEG territory other than Germany (Stamp : English)
TR	SEEG territory other than Germany (Stamp : Spanish)
KB	U. Kingdom
KA	Australia

SELECTION CODE	COUNTRIES
K	Korea

SELECTION CODE	COUNTRIES
SB	Saudi Arabia (127V area)
SBA	Saudi Arabia (220V area)
SC	Taiwan
SD	Venezuela
SE	Hong Kong
SG	Lebanon, Syria, Greece, Pakistan, Iran, Egypt, Thailand, Iraq, Mauritius, Seychelles, Tahiti, Jordan, Sudan, Turkey
SH	South Africa (U. S. A. version)
SHE	South Africa (Europe version)
SJ	Philippines (Europe version)
SJ2	Philippines (U. S. A. version)
SM	Kuwait, Qatar, Oman, UAE, Malta, Bahrain
SMT	Nigeria, Yemen, Kenya

SELECTION CODE	COUNTRIES
RA1	Morocco, Algeria, Tunisia, West Africa
RA2	Chile, Uruguay, Peru, Argentina, Paraguay
RA5	Sri Lanka

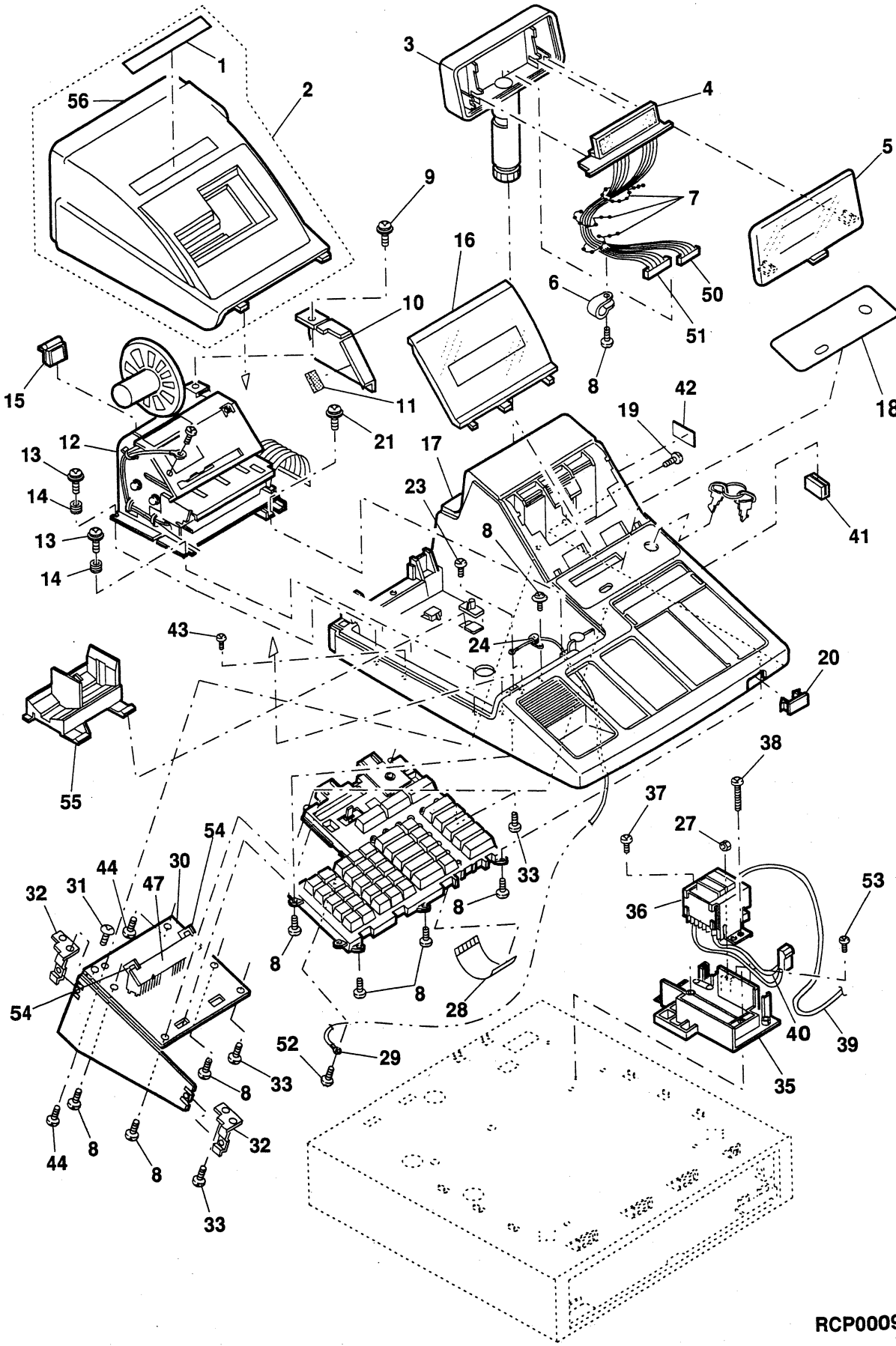
SELECTION CODE	COUNTRIES
RB3	Indonesia
RB4	
RB5	Cyprus
RB6	Panama
RB7	Barbados
RB8	Malaysia (U. S. A. version)

SELECTION CODE	COUNTRIES
RC1	Malaysia (Europe version)
RC2	Singapore
RC5	Dominican Republic, Ecuador

1 Exteriors

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
1	HBDGD6889BHZZ	AE	N	D	Model badge	
2	CCÖVB7037BH02	AW	N	D	Printer cover unit	(include No.1,56)
3	GCABB7084BHZZ	AQ		D	Pop−up cabinet	
4	CPWBF7181BH01	BN		E	Pop−up PWB unit	
5	PFiLW6889BHSA	AN	N	D	Pop up filter	
6	LHLDW6812BHZZ	AC		C	Holder	
7	LBNDJ2003SCZZ	AA		C	Band,wire (large)	
8	XUBSD30P08000	AA		C	Screw (3×8)	
9	XBPSD30P08KS0	AA		C	Screw (3×8KS)	[TQ,TR,TS]
10	LANGT7289RCZZ	AF		C	Printer angle	[TQ,TR,TS]
11	PSPAG6685RCZZ	AA		C	Spacer	[TQ,TR,TS]
12	Ki−ÖB6742RCZZ	BX		E	Printer (UCR802A)	
13	XBPSD30P10KS0	AB		C	Screw (3×10KS)	
14	PCUSG1220CCZZ	AB		C	Printer cushion	
15	PSTM−6658RC01	AR		C	Stamp (YOUR RECIPT THANK YOU)	[TQ,KA,KB]
	PSTM−6660RC01	AR		C	Stamp (MUCHAS GRACIAS)	[TR]
	PSTM−6662RC01	AR		C	Stamp (VIELEN DARK)	[TS]
16	PFiLW6922BHSA	AQ	N	D	Front filter	
17	GCABB7147BHZZ	BC	N	D	Top cabinet	
18	HDECA6806RCZZ	AG		D	Dec panel	
19	XBBSC30P08000	AA		C	Screw (3×8)	
20	GFTAB6754BHZZ	AF		D	Lid of clerk	
21	LX−BZ6769RCZZ	AB		C	Screw	
23	XHPSD30P08000	AA		C	Screw (3×8)	
24	RCÖRF6683RCZZ	AM		C	Core	
27	XNESD30−24000	AA		C	Nut (3NS)	
28	QCNW−7431RCZZ	AF		C	Key cable (22pin)	
29	QCNW−7000RCZZ	AD		C	Gnd wire	
30	CPWBF7297BH01	CC	N	E	Main PWB unit	
31	XBPSD30P06KS0	AA		C	Screw (3×6K)	
32	LANGK7410RCZZ	AD		C	PWB fixing angle	
33	XUBSD30P12000	AA		C	Screw (3×12)	
35	GCÖVH7035BHZZ	AS		D	Trans cover	
⚠ 36	RTRNP6852BHZZ	BC	N	B	Power transformer (220V)	[TQ,TR,TS]
⚠	RTRNP6851BHZZ	BE		B	Power transformer (240V)	[KA,KB]
37	XCPSD30P16X00	AA		C	Screw (3×16)	
38	LX−BZ6755RCZZ	AA		C	Screw	
⚠ 39	QACCE3120QCN5	AL		B	AC cord (250V 2.5A)	[TQ,TR,TS]
⚠	QACCL1018CCZZ	AR		B	AC cord (7.5A)	[KA]
⚠	QPLGA0006QCZZ	AQ		C	Plug (3A 250V)	[KB]
⚠	QCNW−1035CCZZ	AL		B	AC cord	[KB]
40	QCNW−7451RCZZ	AE		C	Trans cable (2pin)	
41	GCÖVH7034BHZZ	AE		D	Battery cover	
42	TCAUS6668RCZZ	AA		D	Caution label	
43	LX−BZ6778BHZZ	AA		C	Screw	
44	LX−BZ6644RCZZ	AA		C	Screw	
47	VVK9MT98GY/−1	AW		B	Display tube	
50	QCNCW6918RC09	AH		C	Connector with wires (9pin)	
51	QCNCW6918RC11	AK		C	Connector (11pin)	
52	XUPSD30P06000	AA		C	Screw (3×6)	
53	XHBSD30P08000	AA		C	Screw (3×8)	
54	LHLDW6802RCZZ	AB		C	Display holder	
55	LPLTP6682BHZZ	AH	N	C	Paper plate	
56	GCÖVB7037BHZZ	AZ		D	Printer cover	

1 Exteriors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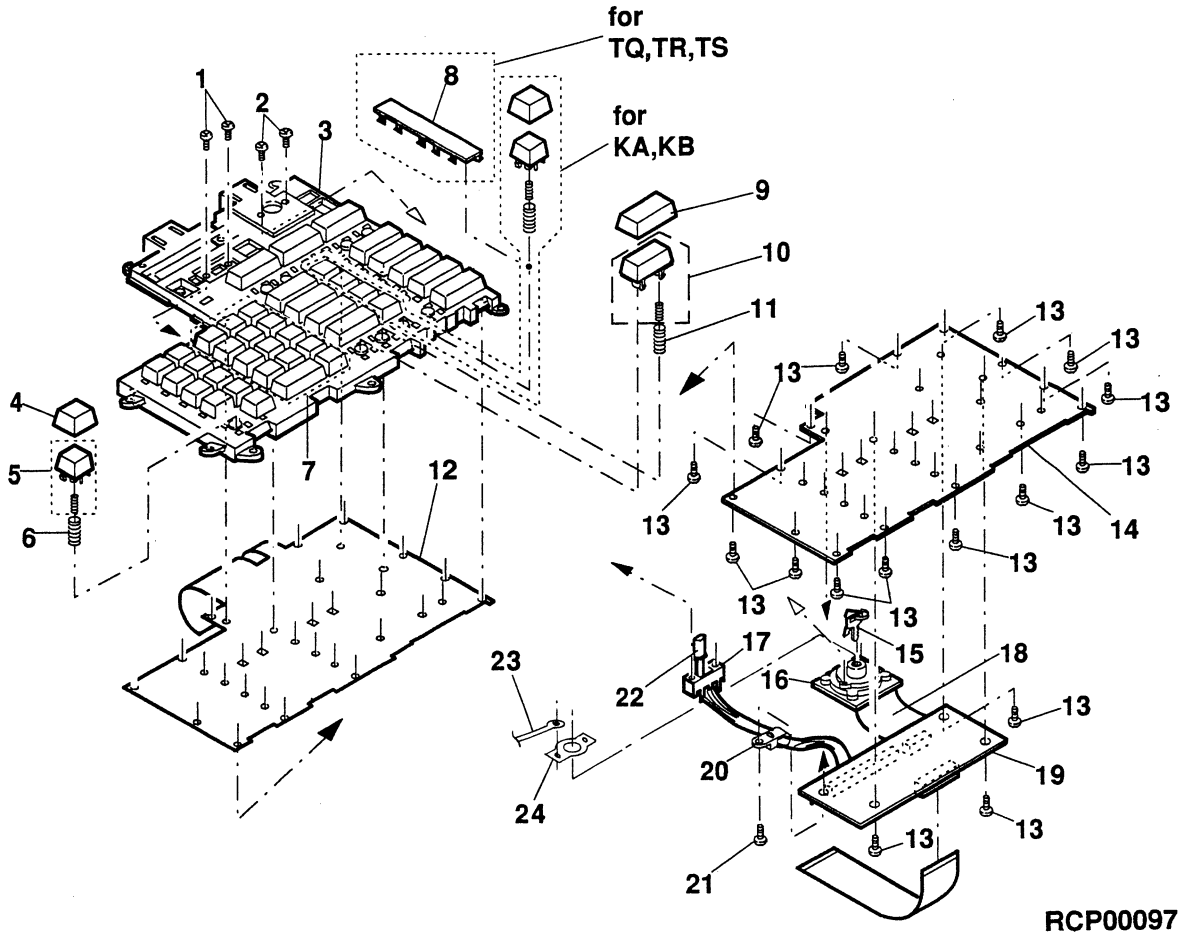
2 Keyboard unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	XBPSF26P04000	AA		C	Screw (2.6×4)
2	XUPSF30P06000	AA		C	Screw (3×6)
3	0EMWK4653021 0	AY		C	Housing (TWK4653−02−010)
4	0EMKT8002000 1	AC		C	Key cap(1×1) (TKT8002−00−002)
5	0EMWK4646651 0	AC		C	Key top (1×1) (TWK4646−65−010)
6	0EMWK4553112 0	AC		C	Spring(1×1) (TWK4553−11−020)
7	0EMWK4647500 2	AU	N	C	Key top ass'y
8	0EMWK4500151 0	AE		C	Dumm cover (1×5) (TWK4500−15−010) [TQ,TR,TS]
9	0EMKT8022000 1	AE		C	Key cap(1×2) (TKT8022−00−002)
10	0EMWK4646661 0	AE		C	Key top (1×2) (TWK4646−66−010)
11	0EMWK4553121 0	AC		C	Spring(1×2) (TWK4553−12−010)
12	0EMWK4653601 0	AZ		C	Patern sheet ass'y (TWK4653−60−010)
13	XUPSD30P06000	AA		C	Screw (3×6)
14	0EMWK4653051 0	AU		C	Plate (TWK4653−05−010)
15	LKGiM7111RCZZ	AG		B	Operator key (OP)
	LKGiM7110RCZZ	AG		B	Master key (MA)
16	0DUBÖDY000002	AP		B	Mode switch
17	QSW−S6850RCZZ	AF		B	Slide switch
18	0EMWK4653111 0	AH		C	Cable (15P) (TWK4653−11−010)
19	CPWBF7298BH01	AW	N	E	I/F PWB unit
20	0EMWK4653121 0	AC		C	Cable holder (TWK4653−12−010)
21	XUPSD30P10000	AA		C	Screw (3×10)
22	JKNBZ6882BHZZ	AE	N	C	SL−SW knob
23	LPLTM6683BHZZ	AD	N	C	Earth plate
24	QCNW−7602BHZZ	AE	N	C	GND wire
101	0EMWK4653061 0	AR		D	Key label (TWK4653−06−010)
501	DUNTK1730BHZZ	BQ	N	E	Key board unit [KA,KB] (except No.1,2,13,15,16,19,21,22,23,24)
	DUNTK1729BHZZ	BQ	N	E	Key board unit [TQ,TR,TS] (except No.1,2,13,15,16,19,21,22,23,24)

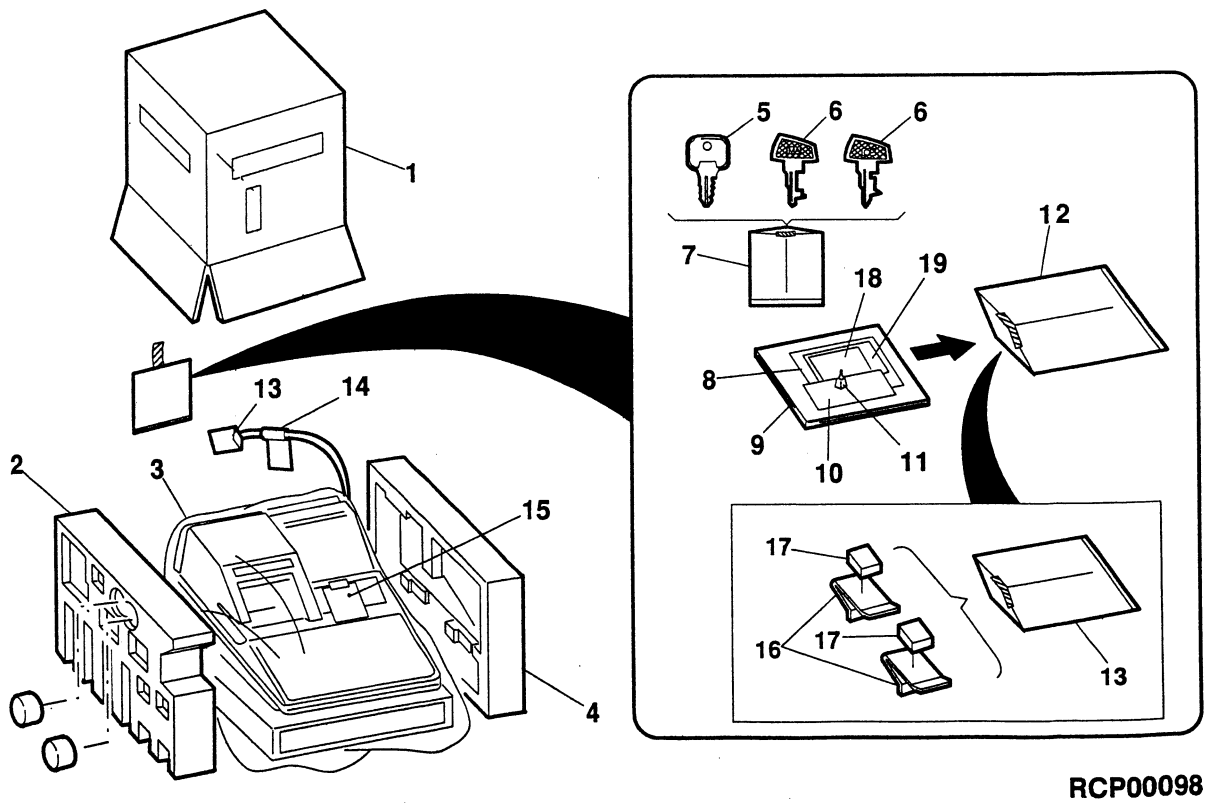
3 Packing material&Accessories

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	SPAKC7981BHSA	AY	N	D	Packing case [KB,TQ,TR,TS]
	SPAKC8190BHZZ	AZ	N	D	Packing case [KA]
2	SPAKA7837RCZZ	AM		D	Packing add−L [except KA]
	SPAKA7266RCZZ	AP		D	Packing add L [KA]
3	PSHEP6681BHZZ	AF		D	Packing sheet
4	SPAKA7836RCZZ	AM		D	Packing add−R [except KA]
	SPAKA7267RCZZ	AP		D	Packing add R [KA]
5	LKGiM7331BHZZ	AE		B	Lock key (1PC)
6	LKGiM7111RCZZ	AG		B	Operator key (OP)
	LKGiM7110RCZZ	AG		B	Master key (MA)
7	SSAKH3012CCZZ	AA		D	Vinyl bag (80×120mm)
8	TiNSN7240BHZZ	AF	N	D	Instruction book [TQ]
9	TiNSM7239BHZZ	AQ	N	D	Instruction book
10	TGANE1001BHZZ	AG		D	Guaranty [KA]
11	UiNK−1001CCZZ	AK		S	Ink for stamp (5cc)
12	SSAKH3015CCZZ	AA		D	Vinyl bag
13	SSAKA5004CCZZ	AA		D	Vinyl bag (100×300mm)
14	TCAUS0002BHZZ	AD		D	Caution label [KB]
15	TCADH6654RCZZ	AB		D	Caution card
16	PCUSS6655RCZZ	AD		C	Balance cushion [except KA]
17	LANGK7072RCZZ	AE		C	Balance plate [except KA]
18	PSHEK6717RCZZ	AH		D	Balance card [except KA]
19	TCADZ2001BHZZ	AM		D	Card [KA]
101	UBNDA1008CCZZ	AA		C	AC cord band (120mm)

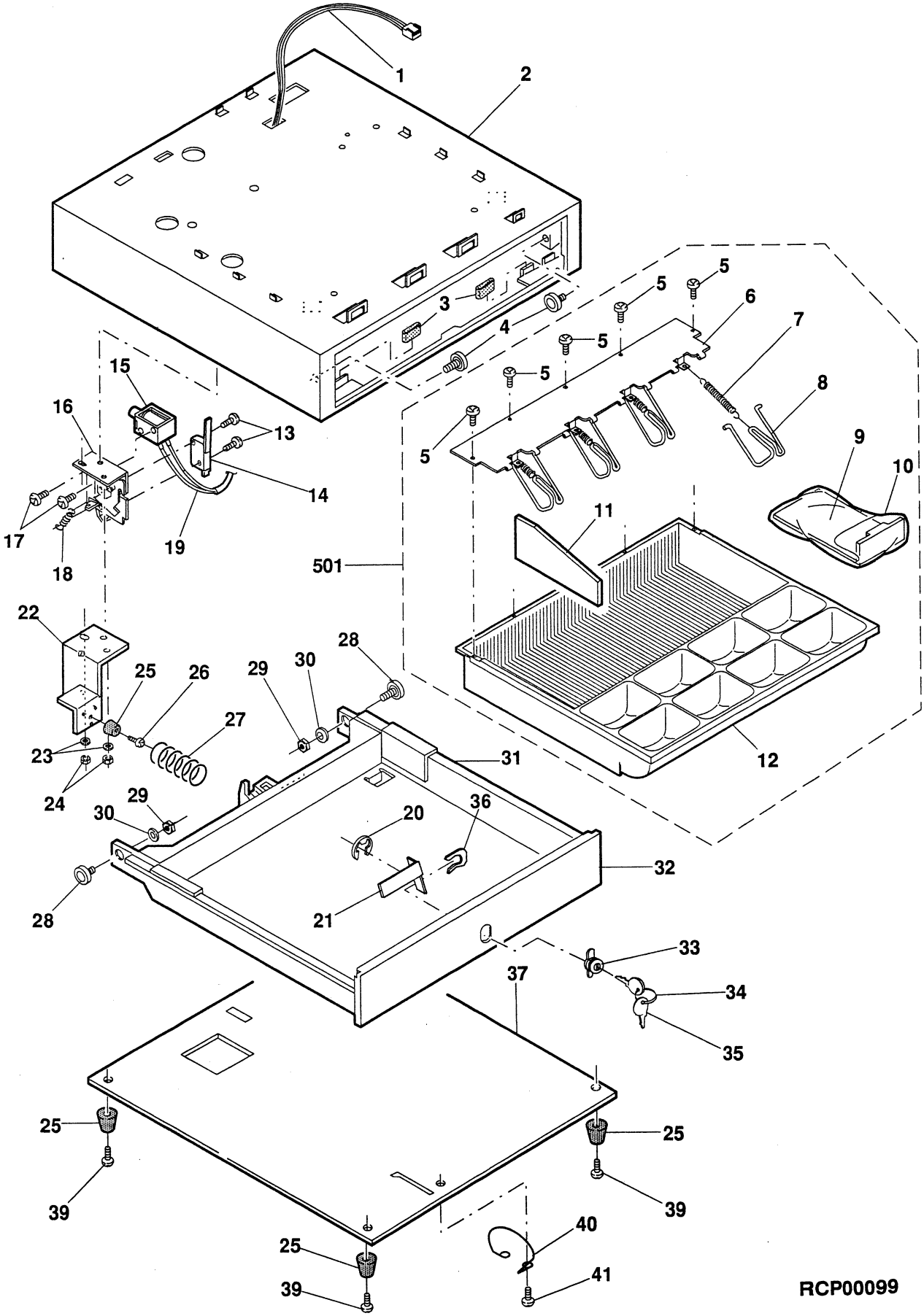
2 Keyboard unit



3 Packing material&Accessories



[4] Drawer box unit (SK460type) [KA only] (SK423type) [except KA]



4 Drawer box unit (SK460type) [KA only] (SK423type) [except KA]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	QCNW-7556BHZZ	AL		C	Connector with wire
2	CCABM7148BH01	BQ	N	D	Cabinet unit [KA]
	CCABM7139BH01	BR		D	Cabinet unit [except KA]
3	PGUMM6695BHZZ	AE		D	Stopper gum
4	NRÖLP6650BHZZ	AP		C	Roller
5	XUPSD30P08000	AA		C	Screw (3×8)
6	LBRC-6663RCZZ	AM		C	Bill bracket
7	MSPRT6714BHZZ	AE		C	Bill spring
8	MLEVF6695BHZZ	AK		C	Bill lever
9	PSKR-6629BHZZ	AL		C	Bill separator
10	SSAKA5004CCZZ	AA		D	Vinyl bag (100×300mm)
11	PSKR-6628BHZZ	AG		C	Separator
12	GCAS-6680BHZZ	BB	N	D	Money case [KA]
	GCAS-6678BHZZ	BC		D	Money case [except KA]
13	LX-BZ6776BHZZ	AA		C	Screw
14	QSW-M6872BHZZ	AR		B	Micro switch
15	RPLU-6637BHZZ	AZ		B	Plunger
16	CFRM-6683BH01	AW		C	Lock frame unit
17	LX-BZ6775BHZZ	AA		C	Screw
18	MSPRT6713BHZZ	AD		C	Open lever spring
19	QCNW-7576BHZZ	AB		C	Wire
20	XRESJ50-06000	AA		C	E type ring (5mm)
21	MCAMM6634BHZZ	AE		C	Lock cam [KA]
	MCAMM6633BHZZ	AG		C	Lock cam [except KA]
22	LFRM-6682BHZZ	AN		D	Bell frame
23	XWSSD40-10000	AA		C	Washer (4mm)
24	XNESD40-32000	AA		C	Nut (M4)
25	PGUMM6696BHZZ	AE		D	Gum leg
26	XHBSD30P12000	AA		C	Screw (3×12)
27	MSPRC6723BHZZ	AE	N	C	Push out spring [KA]
	MSPRC6712BHZZ	AF		C	Push out spring [except KA]
28	NRÖLP6650BHZZ	AP		C	Roller
29	XNESD60-50000	AA		C	Nut (M6)
30	XWSSD60-15000	AA		C	Washer (6mm)
31	CCAS-6679BH01	BE	N	D	Case unit [KA]
	CCAS-6677BH01	BC		D	Case unit [except KA]
32	GCÖVA7053BHZZ	AR	N	D	Front cover [KA]
	GCÖVA7036BHZZ	AS		D	Front cover [except KA]
33	LKGiW7330BHZZ	AY		B	Lock key(body)
34	PRNGT6637BHZZ	AA		C	Key ring
35	LKGiM7331BHZZ	AE		B	Lock key (1PC)
36	MSPRK6718BHZZ	AF		C	Lock key spring
37	LPLTM6679BHZZ	AZ	N	D	Bottom plate [KA]
	LPLTM6674BHZZ	AZ		D	Bottom plate [except KA]
39	XHBSD40P15000	AA		C	Screw (4×15)
40	MSPRB6722BHZZ	AC	N	C	Earth spring [KA]
	MSPRB6711BHZZ	AD		C	Earth spring [except KA]
41	XHPSC30P08000	AA		C	Screw (3×8)
501	CCAS-6680BH01	BG	N	E	Money case unit(4B/8C) [KA]
	CCAS-6678BH01	BK		E	Money case unit(4B/8C) [except KA]
502	GDRW-6679BH01	BG	N	D	Drawer case unit (include No.28~32) [KA]
	GDRW-6678BHZZ	BF		D	Drawer case unit (include No.28~32) [except KA]
503	DUNT-1751BHZZ	AY	N	E	Lock key unit (include No.20,21,33~36) [KA]
	DUNT-1306BHZZ	AX	N	E	Lock key unit (include No.20,21,33~36) [except KA]
	(Unit)				
901	GBÖXD7102BHZZ	BZ	N	E	Drawer box unit [KA]
	GBÖXD7098BHZZ	CA		E	Drawer box unit [except KA]

5 Main PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	LANGK7410RCZZ	AD		C	PWB fixing angle
2	LHLDW6802RCZZ	AB		C	Display holder
3	PRDAF1032CCZZ	AE		C	Heat sink
4	VVK9MT98GY/-1	AW		B	Display tube
5	QCNCM1101CCZZ	AB		C	Connector (5273-2) [CN1]
6	QCNCM7057BHZZ	AB		C	Connector (5C45-3) [CN7]
7	QCNCM6865RC0i	AC		C	Connector (9pin) [CN5]
8	QCNCM6865RC1A	AD		C	Connector (11pin) [CN4]
9	QCNCM7064RC0H	AD	N	C	Connector (8pin)
10	QCNCM7064RC1J	AE	N	C	Connector (10pin)
11	QCNCW5111BC2B	AE		C	Connector (22pin) [CN6]
12	QCNCW6854RC3A	AH		C	Connector (31pin) [CN2]
13	QCNW-6891RCZZ	AB		C	GND wire
⚠14	QFS-C1035CCZZ	AE		A	Fuse (1.6A/250V S) [F1]
15	QFSHD5002CHZZ	AB		C	Fuse holder

5 Main PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
16	RALMB6645RCZZ	AH		B	Buzzer [BUZ]
⚠17	RTRNH6838RCZZ	AE		B	Converter transformer
18	UBATN6639BHZZ	BC		B	Battery (170mAh 3.6V)
19	LX-BZ6644RCZZ	AA		C	Screw
20	XBPSD30P06000	AA		C	Screw (3×6)
21	XBPSD30P06KS0	AA		C	Screw (3×6K)
22	VHiKiD65003AP	AE		B	IC (KID65003AP) [IC6~IC9]
23	VHiHM6264LP15	AX		B	IC (HM6264LP15) [IC2]
24	VHiMC74HC373N	AK		B	IC (MC74HC373N) [IC3]
25	VHiTC4094BP-1	AM		B	IC (TC4094BP) [IC4,IC5]
26	VHiUP75217041	AX		B	IC (UP75217041) [IC1]
27	VS2SC3198-/-1	AL		B	Transistor (2SC3198) [Q9~Q11]
28	VSKSB601-//-1	AN		B	Transistor (KSB601) [Q3]
29	VS2SB926-S/TC	AD		B	Transistor (2SB926) [Q4,Q6,Q7]
30	VS2SC3784-/-1	AD		B	Transistor (2SC3784) [Q8]
31	VS2SC4153-/-1	AG		B	Transistor (2SC4153) [Q5]
32	VS2SD1193-/-1	AL		B	Transistor (2SD1193) [Q1]
33	VHDEU1Z////-1	AB		B	Diode (EU1Z) [D5]
34	VHD1D4B42//-1	AD		B	Diode (1D4B42) [BD1]
35	VHD1N4002G/-1	AA		B	Diode (1N4002G) [D1,D3,D7,D8,D9]
36	VHD1SS41B//-1	AB		B	Diode (1SS41B) [D4]
37	VHDDSS133HV-1	AA		B	Diode (DSS133HV) [D2,D10~D18,D20~D22]
38	VHEMTZ15A//-1	AB		B	Zener diode (MTZ15A) [ZD6]
39	VHEMTZ20D//-1	AA		B	Zener diode (MTZ20D) [ZD1]
40	VHEMTZ4.3B/-1	AA		B	Zener diode (MTZ4.3B) [ZD2]
41	VHEMTZ9.1C/-1	AA		B	Zener diode (MTZ9.1C) [ZD4]
42	VHERD24EL4/-1	AB		B	Zener diode (RD24EL4) [ZD3]
43	VHERD4.3EL2-1	AB		B	Zener diode (RD4.3EL2) [ZD5]
44	RCRM-1011CCZZ	AD		B	Oscillator (4.19MHz) [X2]
45	RCRSP1003CCZZ	AT		B	Crystal (32KHz) [X1]
46	RC-EZB478RC1W	AK		C	Capacitor (4700μF/45V) [C1]
47	VCCCPU1HH220J	AA		C	Capacitor (50WV 22pF) [C26]
48	VCCCPU1HH300J	AA		C	Capacitor (50WV 30pF) [C28,C29]
49	VCCCPU1HH330J	AB		C	Capacitor (50WV 33pF) [C25]
50	VCKYPU1HB682K	AA		C	Capacitor (50WV 6800pF) [C27]
51	VCKYPU1HB222K	AA		C	Capacitor (50WV 2200PF) [C6]
52	VCKYPU1HB331K	AA		C	Capacitor (50WV 330pF) [C21,C22]
53	VCKYPU1HB221K	AB		C	Capacitor (50WV 220PF) [C7]
54	VCTYPU1EX104M	AB		C	Capacitor (0.1μF/25V) [C13,C16,C17,C18,C19,C23,C30,C24]
55	VCQYNA1HM333K	AA		C	Capacitor (50WV 0.033μF) [C3]
56	VCEAGA1HW474M	AB		C	Capacitor (50WV 0.47μF) [C12]
57	VCEAGA1HW335M	AB		C	Capacitor (50WV 3.3μF) [C2,C10,C11,C15,C31]
58	VCEAGA1CW106M	AA		C	Capacitor (16WV 10μF) [C4,C14,C20]
59	VCEAGA1HW106M	AA		C	Capacitor (50WV 10μF) [C34]
60	VCEAGA1HW226M	AB		C	Capacitor (50WV 22μF) [C5]
61	VCEAGA1CW336M	AA		C	Capacitor (16WV 33μF) [C32]
62	VCEAGA1HW107M	AA		C	Capacitor (50WV 100μF) [C8]
63	VCEAGA1CW337M	AB		C	Capacitor (16WV 330μF) [C9]
64	RMPTC6562QCJB	AB		B	Block resistor (5.6KΩ×6 1/8W ±5%) [RA2]
65	VRS-RE3DA221J	AB		C	Resistor (2W 220Ω ±5%) [R10,R11]
66	VRD-RC2EY101J	AA		C	Resistor (1/4W 100Ω ±5%) [R2]
67	VRD-RC2EY102J	AA		C	Resistor (1/4W 1KΩ ±5%) [R26,R28,R30]
68	VRD-RC2EY123J	AA		C	Resistor (1/4W 12KΩ ±5%) [R1]
69	VRD-RC2EY153J	AA		C	Resistor (1/4W 15KΩ ±5%) [R24]
70	VRD-RC2EY221J	AA		C	Resistor (1/4W 220Ω ±5%) [R29]
71	VRD-RC2EY222J	AA		C	Resistor (1/4W 2.2KΩ ±5%) [R8]
72	VRD-RC2EY223J	AA		C	Resistor (1/4W 22KΩ ±5%) [R9,R18,R19]
73	VRD-RC2EY272J	AA		C	Resistor (1/4W 2.7KΩ ±5%) [R6,R12,R13]
74	VRD-RC2EY331J	AA		C	Resistor (1/4W 330KΩ ±5%) [R31]
75	VRD-RC2EY392J	AA		C	Resistor (1/4W 3.9KΩ ±5%) [R4]
76	VRD-RC2EY471J	AA		C	Resistor (1/4W 470Ω ±5%) [R7]
77	VRD-RC2EY472J	AA		C	Resistor (1/4W 4.7KΩ ±5%) [R3,R16,R22]
78	VRD-RC2EY562J	AA		C	Resistor (1/4W 5.6KΩ ±5%) [R14]
79	VRD-RC2EY563J	AA		C	Resistor (1/4W 56KΩ ±5%) [R23]
80	VRD-RC2EY202J	AA		C	Resistor (1/4W 2.0KΩ ±5%) [R33]
81	RCORF6671BHZZ	AK		C	Bead core (BFS3550A) [B1~B6]
82	RMPTC4472QCJB	AB		B	Block resistor (4.7KΩ×4 1/8W ±5%) [RA1]
83	VRD-RC2EY203J	AA		C	Resistor (1/4W 20KΩ ±5%) [R15]
84	VCKYPU1HB102K	AA		C	Capacitor (50WV 0.001μF) [C35,C37,C38]
85	VCKYPU1HB332K	AA		C	Capacitor (50WV 0.0033μF) [C39]
86	QCNCM1142CCZZ	AC		B	Connector (2pin) [CN8]
87	VCKYPA1HB102K	AA		C	Capacitor (50WV 0.001μF) [C36]
88	RR-XZ6647RCZL	AA		B	Fuse resistor (100Ω) [R5]
	(Unit)				
901	CPWBF7297BH01	CC	N	E	Main PWB unit

6 Key I/F PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	QCNCW5111BC2B	AE		C	Connector (22pin) [CN4]
2	VHDDSS133HV-1	AA		B	Diode (DDS133HV) [D1~D16]
3	QCNW-7585BHZZ	AB	N	C	Lead wire [CN3]
4	QCNW-7586BHZZ	AB	N	C	Lead wire [CN3]
5	QCNW-7555BHZZ	AG		C	Mode cable
6	RCÖRF6675BHZZ	AC		C	Bead core (BFS3550R2F) [B1~B6]
7	QCNCW7076RC0E	AB	N	C	Connector (5pin) [CN2]
8	QCNCW7076RC1H	AD	N	C	Connector (18pin) [CN1]
	(Unit)				
901	CPWBF7298BH01	AW	N	E	I/F PWB unit

7 Pop-up PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	QCNCW6918RC09	AH		C	Connector with wires (9pin)
2	QCNCW6918RC11	AK		C	Connector (11pin)
3	VVK9MT98G//-1	AW		B	Display tube
	(Unit)				
901	CPWBF7181BH01	BN		E	Pop-up PWB unit

8 Articles for consumption

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	UINK-1001CCZZ	AK		S	Ink (5cc)
2	NRÖLR6638RCZZ	AY		S	Ink roller (purple)
3	DPAPR1006CSZZ	AR		S	Roll paper (5rolls/1pack)

9 Service route options

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	DKIT-8633RCZZ	BE		S	Fixing kit
2	DKIT-3381RCZZ	BD		S	Shield plate kit
3	LKGIM7113RCZZ	AK		B	Srv key
4	GCÖVB6985RCZZ	AY		D	Key cover
5	LKGIM7129RCZZ	AE		B	Sub master key

10 AC CORD

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
⚠ 1	QACCJ1413QCZZ	AG		B	AC cord Japan, RB6, RB7, RC5, SC, SD
⚠	QACCA3441QCZZ	AL		B	AC cord SB
⚠ 2	QACCD8411QCZZ	AN		B	AC cord U. S. A, Canada, Japan (Okinawa), Guam
⚠ 3	QACCE1422QCZZ	AP		B	AC cord RA1, RA2, RB3, RB5, SG, TQ, TR, TS, K AC cord Yugoslavia
⚠ 4	QPLGA4501CCZZ	AK		B	Plug SE
⚠	QCNW-6629RCZZ	AN		B	AC cord SE
⚠ 5	QPLGA0018WRE0	AN		B	Plug SH, RA5
⚠	QCNW-6629RCZZ	AN		B	AC cord SH, RA5, SHE
⚠	PHOG-1023CCZZ	AB		B	Bushing for AC cord SH, RA5, SHE
⚠ 6	QACCL7421QCZZ	AS		B	AC cord KA, SL
7	QTANP0004HCZZ	AB		B	Lug terminal RC2, SM, SMT, RC1, SBA, RB8
	QPLGA0006QCZZ	AN		B	Plug KB, SM, SMT, RC1, SBA, RB8, RC2
	QCNW-7212RCZZ	AH		B	AC cord KB, RC1, RC2, SM, SMT, SBA
⚠	QCNW-6629RCZZ	AN		B	AC cord RB8
⚠ 8	QCNW-6629RCZZ	AN		B	AC cord RB4 (AC cord only. The plug is not included.)
⚠ 9	QACCZ3423QCZZ	AH		B	AC cord SJ, SJ2

Note : Instead of AC cords QACCZ3421QCZZ/QACCK1008CCZZ, the AC cord QACCE1422QCZZ(No.3) is supllied as service spare part.

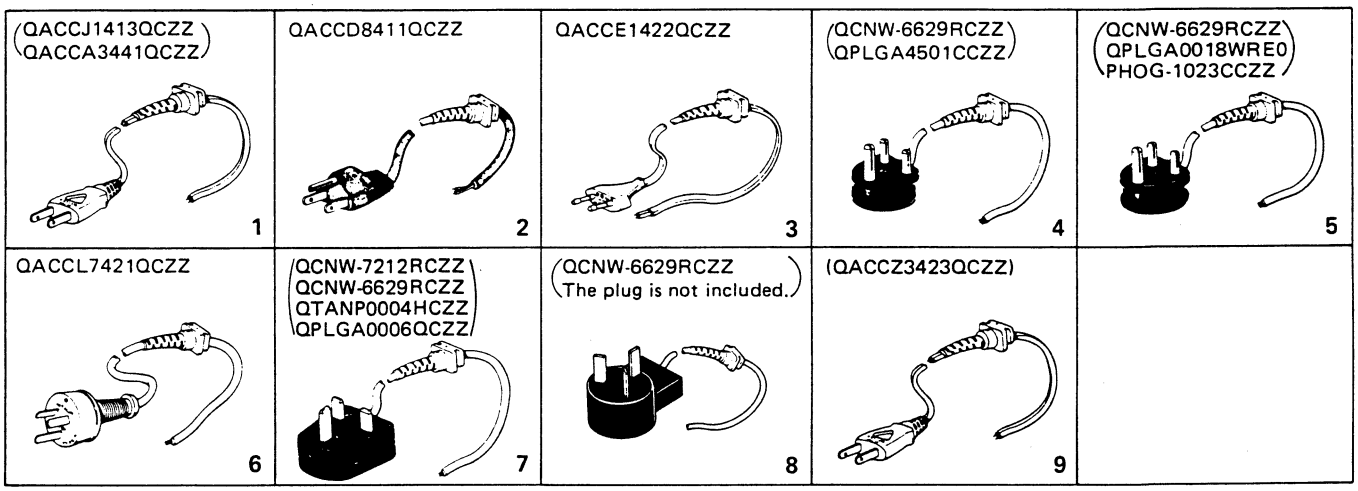


Table of destinations

SELECTION CODE	COUNTRIES
U	U. S. A., Guam
A	Canada
TS	Germany
TQ	SEEG territory other than Germany (Stamp : English)
TR	SEEG territory other than Germany (Stamp : Spanish)
KB	U. Kingdom
KA	Australia

SELECTION CODE	COUNTRIES
K	Korea

SELECTION CODE	COUNTRIES
SB	Saudi Arabia (127V area)
SBA	Saudi Arabia (220V area)
SC	Taiwan
SD	Venezuela
SE	Hong Kong
SG	Lebanon, Syria, Greece, Pakistan, Iran, Egypt, Thailand, Iraq, Mauritius, Seychelles, Tahiti, Jordan, Sudan, Turkey
SH	South Africa (U. S. A. version)
SHE	South Africa (Europe version)
SJ	Philippines (Europe version)
SJ2	Philippines (U. S. A. version)
SM	Kuwait, Qatar, Oman, UAE, Malta, Bahrain
SMT	Nigeria, Yemen, Kenya

SELECTION CODE	COUNTRIES
RA1	Morocco, Algeria, Tunisia, West Africa
RA2	Chile, Uruguay, Peru, Argentina, Paraguay
RA5	Sri Lanka

SELECTION CODE	COUNTRIES
RB3	Indonesia
RB4	
RB5	Cyprus
RB6	Panama
RB7	Barbados
RB8	Malaysia (U. S. A. version)

SELECTION CODE	COUNTRIES
RC1	Malaysia (Europe version)
RC2	Singapore
RC5	Dominican Republic, Ecuador

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PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
〔C〕					
CCABM7139BH01	4- 2	BR		D	
CCABM7148BH01	4- 2	BQ	N	D	
CCAS-6677BH01	4- 31	BC		D	
CCAS-6678BH01	4- 501	BK		E	
CCAS-6679BH01	4- 31	BE	N	D	
CCAS-6680BH01	4- 501	BG	N	E	
CCŌVB7037BH02	1- 2	AW	N	D	
CFRM-6683BH01	4- 16	AW		C	
CPWBF7181BH01	1- 4	BN		E	
〃	7- 901	BN		E	
CPWBF7297BH01	1- 30	CC	N	E	
〃	5- 901	CC	N	E	
CPWBF7298BH01	2- 19	AW	N	E	
〃	6- 901	AW	N	E	
〔D〕					
DKiT-3381RCZZ	9- 2	BD		S	
DKiT-8633RCZZ	9- 1	BE		S	
DPAPR1006CSZZ	8- 3	AR		S	
DUNT-1306BHZZ	4- 503	AX	N	E	
DUNT-1751BHZZ	4- 503	AY	N	E	
DUNTK1729BHZZ	2- 501	BQ	N	E	
DUNTK1730BHZZ	2- 501	BQ	N	E	
〔G〕					
GBŌXD7098BHZZ	4- 901	CA		E	
GBŌXD7102BHZZ	4- 901	BZ	N	E	
GCABB7084BHZZ	1- 3	AQ		D	
GCABB7147BHZZ	1- 17	BC	N	D	
GCAS-6678BHZZ	4- 12	BC		D	
GCAS-6680BHZZ	4- 12	BB	N	D	
GCŌVA7036BHZZ	4- 32	AS		D	
GCŌVA7053BHZZ	4- 32	AR	N	D	
GCŌVB6985RCZZ	9- 4	AY		D	
GCŌVB7037BHZZ	1- 56	AZ		D	
GCŌVH7034BHZZ	1- 41	AE		D	
GCŌVH7035BHZZ	1- 35	AS		D	
GDRW-6678BHZZ	4- 502	BF		D	
GDRW-6679BH01	4- 502	BG	N	D	
GFTAB6754BHZZ	1- 20	AF		D	
〔H〕					
HBDGD6889BHZZ	1- 1	AE	N	D	
HDECA6806RCZZ	1- 18	AG		D	
〔J〕					
JKNBZ6882BHZZ	2- 22	AE	N	C	
〔K〕					
Ki-ŌB6742RCZZ	1- 12	BX		E	
〔L〕					
LANGK7072RCZZ	3- 17	AE		C	
LANGK7410RCZZ	1- 32	AD		C	
〃	5- 1	AD		C	
LANGT7289RCZZ	1- 10	AF		C	
LBNDJ2003SCZZ	1- 7	AA		C	
LBRC-6663RCZZ	4- 6	AM		C	
LFRM-6682BHZZ	4- 22	AN		D	
LHLDW6802RCZZ	1- 54	AB		C	
〃	5- 2	AB		C	
LHLDW6812BHZZ	1- 6	AC		C	
LKGiM7110RCZZ	2- 15	AG		B	
〃	3- 6	AG		B	
LKGiM7111RCZZ	2- 15	AG		B	
〃	3- 6	AG		B	
LKGiM7113RCZZ	9- 3	AK		B	
LKGiM7129RCZZ	9- 5	AE		B	
LKGiM7331BHZZ	3- 5	AE		B	
〃	4- 35	AE		B	
LKGiW7330BHZZ	4- 33	AY		B	
LPLTM6674BHZZ	4- 37	AZ		D	
LPLTM6679BHZZ	4- 37	AZ	N	D	
LPLTM6683BHZZ	2- 23	AD	N	C	
LPLTP6682BHZZ	1- 55	AH	N	C	
LX-BZ6644RCZZ	1- 44	AA		C	
〃	5- 19	AA		C	
LX-BZ6755RCZZ	1- 38	AA		C	
LX-BZ6769RCZZ	1- 21	AB		C	
LX-BZ6775BHZZ	4- 17	AA		C	
LX-BZ6776BHZZ	4- 13	AA		C	
LX-BZ6778BHZZ	1- 43	AA		C	
〔M〕					
MCAMM6633BHZZ	4- 21	AG		C	
MCAMM6634BHZZ	4- 21	AE		C	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
MLEVF6695BHZZ	4- 8	AK		C	
MSPRB6711BHZZ	4- 40	AD		C	
MSPRB6722BHZZ	4- 40	AC	N	C	
MSPRC6712BHZZ	4- 27	AF		C	
MSPRC6723BHZZ	4- 27	AE	N	C	
MSPRK6718BHZZ	4- 36	AF		C	
MSPRT6713BHZZ	4- 18	AD		C	
MSPRT6714BHZZ	4- 7	AE		C	
〔N〕					
NRŌLP6650BHZZ	4- 4	AP		C	
〃	4- 28	AP		C	
NRŌLR6638RCZZ	8- 2	AY		S	
〔P〕					
PCUSG1220CCZZ	1- 14	AB		C	
PCUSS6655RCZZ	3- 16	AD		C	
PFiLW6889BHSA	1- 5	AN	N	D	
PFiLW6922BHSA	1- 16	AQ	N	D	
PGUMM6695BHZZ	4- 3	AE		D	
PGUMM6696BHZZ	4- 25	AE		D	
PRDAF1032CCZZ	5- 3	AE		C	
PRNGT6637BHZZ	4- 34	AA		C	
PSHEK6717RCZZ	3- 18	AH		D	
PSHEP6681BHZZ	3- 3	AF		D	
PSKR-6628BHZZ	4- 11	AG		C	
PSKR-6629BHZZ	4- 9	AL		C	
PSPAG6685RCZZ	1- 11	AA		C	
PSTM-6658RC01	1- 15	AR		C	
PSTM-6660RC01	1- 15	AR		C	
PSTM-6662RC01	1- 15	AR		C	
〔Q〕					
QACCE3120QCN5	1- 39	AL		B	
QACCL1018CCZZ	1- 39	AR		B	
QCNCM1101CCZZ	5- 5	AB		C	
QCNCM1142CCZZ	5- 86	AC		B	
QCNCM6865RC0i	5- 7	AC		C	
QCNCM6865RC1A	5- 8	AD		C	
QCNCM7057BHZZ	5- 6	AB		C	
QCNCM7064RC0H	5- 9	AD	N	C	
QCNCM7064RC1J	5- 10	AE	N	C	
QCNCW5111BC2B	5- 11	AE		C	
〃	6- 1	AE		C	
QCNCW6854RC3A	5- 12	AH		C	
QCNCW6918RC09	1- 50	AH		C	
〃	7- 1	AH		C	
QCNCW6918RC11	1- 51	AK		C	
〃	7- 2	AK		C	
QCNCW7076RC0E	6- 7	AB	N	C	
QCNCW7076RC1H	6- 8	AD	N	C	
QCNW-1035CCZZ	1- 39	AL		B	
QCNW-6891RCZZ	5- 13	AB		C	
QCNW-7000RCZZ	1- 29	AD		C	
QCNW-7431RCZZ	1- 28	AF		C	
QCNW-7451RCZZ	1- 40	AE		C	
QCNW-7555BHZZ	6- 5	AG		C	
QCNW-7556BHZZ	4- 1	AL		C	
QCNW-7576BHZZ	4- 19	AB		C	
QCNW-7585BHZZ	6- 3	AB	N	C	
QCNW-7586BHZZ	6- 4	AB	N	C	
QCNW-7602BHZZ	2- 24	AE	N	C	
QFS-C1035CCZZ	5- 14	AE		A	
QFSHD5002CHZZ	5- 15	AB		C	
QPLGA0006QCZZ	1- 39	AQ		C	
QSW-M6872BHZZ	4- 14	AR		B	
QSW-S6850RCZZ	2- 17	AF		B	
〔R〕					
RALMB6645RCZZ	5- 16	AH		B	
RC-EZB478RC1W	5- 46	AK		C	
RCŌRF6671BHZZ	5- 81	AK		C	
RCŌRF6675BHZZ	6- 6	AC		C	
RCŌRF6683RCZZ	1- 24	AM		C	
RCRM-1011CCZZ	5- 44	AD		B	
RCRSP1003CCZZ	5- 45	AT		B	
RMPTC4472QCJB	5- 82	AB		B	
RMPTC6562QCJB	5- 64	AB		B	
RPLU-6637BHZZ	4- 15	AZ		B	
RR-XZ6647RCZL	5- 88	AA		B	
RTRNH6838RCZZ	5- 17	AE		B	
RTRNP6851BHZZ	1- 36	BE		B	
RTRNP6852BHZZ	1- 36	BC	N	B	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
【S】					
SPAKA7266RCZZ	3- 2	AP		D	
SPAKA7267RCZZ	3- 4	AP		D	
SPAKA7836RCZZ	3- 4	AM		D	
SPAKA7837RCZZ	3- 2	AM		D	
SPAKC7981BHSA	3- 1	AY	N	D	
SPAKC8190BHZZ	3- 1	AZ	N	D	
SSAKA5004CCZZ	3- 13	AA		D	
//	4- 10	AA		D	
SSAKH3012CCZZ	3- 7	AA		D	
SSAKH3015CCZZ	3- 12	AA		D	
【T】					
TCADH6654RCZZ	3- 15	AB		D	
TCADZ2001BHZZ	3- 19	AM		D	
TCAUS0002BHZZ	3- 14	AD		D	
TCAUS6668RCZZ	1- 42	AA		D	
TGANE1001BHZZ	3- 10	AG		D	
TiNSM7239BHZZ	3- 9	AQ	N	D	
TiNSN7240BHZZ	3- 8	AF	N	D	
【U】					
UBATN6639BHZZ	5- 18	BC		B	
UBNDA1008CCZZ	3- 101	AA		C	
UiNK-1001CCZZ	3- 11	AK		S	
//	8- 1	AK		S	
【V】					
VCCCPU1HH220J	5- 47	AA		C	
VCCCPU1HH300J	5- 48	AA		C	
VCCCPU1HH330J	5- 49	AB		C	
VCEAGA1CW106M	5- 58	AA		C	
VCEAGA1CW336M	5- 61	AA		C	
VCEAGA1CW337M	5- 63	AB		C	
VCEAGA1HW106M	5- 59	AA		C	
VCEAGA1HW107M	5- 62	AA		C	
VCEAGA1HW226M	5- 60	AB		C	
VCEAGA1HW335M	5- 57	AB		C	
VCEAGA1HW474M	5- 56	AB		C	
VCKYPA1HB102K	5- 87	AA		C	
VCKYPU1HB102K	5- 84	AA		C	
VCKYPU1HB221K	5- 53	AB		C	
VCKYPU1HB222K	5- 51	AA		C	
VCKYPU1HB331K	5- 52	AA		C	
VCKYPU1HB332K	5- 85	AA		C	
VCKYPU1HB682K	5- 50	AA		C	
VCQYNA1HM333K	5- 55	AA		C	
VCTYPU1EX104M	5- 54	AB		C	
VHDDSS133HV-1	5- 37	AA		B	
//	6- 2	AA		B	
VHDEU1Z////-1	5- 33	AB		B	
VHD1D4B42//-1	5- 34	AD		B	
VHD1N4002G/-1	5- 35	AA		B	
VHD1SS41B//-1	5- 36	AB		B	
VHEMTZ15A//-1	5- 38	AB		B	
VHEMTZ20D//-1	5- 39	AA		B	
VHEMTZ4.3B/-1	5- 40	AA		B	
VHEMTZ9.1C/-1	5- 41	AA		B	
VHERD24EL4/-1	5- 42	AB		B	
VHERD4.3EL2-1	5- 43	AB		B	
VHiHM6264LP15	5- 23	AX		B	
VHiKiD65003AP	5- 22	AE		B	
VHiMC74HC373N	5- 24	AK		B	
VHiTC4094BP-1	5- 25	AM		B	
VHiUP75217041	5- 26	AX		B	
VRD-RC2EY101J	5- 66	AA		C	
VRD-RC2EY102J	5- 67	AA		C	
VRD-RC2EY123J	5- 68	AA		C	
VRD-RC2EY153J	5- 69	AA		C	
VRD-RC2EY202J	5- 80	AA		C	
VRD-RC2EY203J	5- 83	AA		C	
VRD-RC2EY221J	5- 70	AA		C	
VRD-RC2EY222J	5- 71	AA		C	
VRD-RC2EY223J	5- 72	AA		C	
VRD-RC2EY272J	5- 73	AA		C	
VRD-RC2EY331J	5- 74	AA		C	
VRD-RC2EY392J	5- 75	AA		C	
VRD-RC2EY471J	5- 76	AA		C	
VRD-RC2EY472J	5- 77	AA		C	
VRD-RC2EY562J	5- 78	AA		C	
VRD-RC2EY563J	5- 79	AA		C	
VRS-RE3DA221J	5- 65	AB		C	
VSKSB601-//-1	5- 28	AN		B	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
VS2SB926-S/TC	5- 29	AD		B	
VS2SC3198-/-1	5- 27	AL		B	
VS2SC3784-/-1	5- 30	AD		B	
VS2SC4153-/-1	5- 31	AG		B	
VS2SD1193-/-1	5- 32	AL		B	
VVK9MT98G//-1	7- 3	AW		B	
VVK9MT98GY/-1	1- 47	AW		B	
//	5- 4	AW		B	
【X】					
XBBSC30P08000	1- 19	AA		C	
XBPSD30P06KS0	1- 31	AA		C	
//	5- 21	AA		C	
XBPSD30P06000	5- 20	AA		C	
XBPSD30P08KS0	1- 9	AA		C	
XBPSD30P10KS0	1- 13	AB		C	
XBPSF26P04000	2- 1	AA		C	
XCPSD30P16X00	1- 37	AA		C	
XHBSD30P08000	1- 53	AA		C	
XHBSD30P12000	4- 26	AA		C	
XHBSD40P15000	4- 39	AA		C	
XHPSC30P08000	4- 41	AA		C	
XHPSD30P08000	1- 23	AA		C	
XNESD30-24000	1- 27	AA		C	
XNESD40-32000	4- 24	AA		C	
XNESD60-50000	4- 29	AA		C	
XRESJ50-06000	4- 20	AA		C	
XUBSD30P08000	1- 8	AA		C	
XUBSD30P12000	1- 33	AA		C	
XUPSD30P06000	1- 52	AA		C	
//	2- 13	AA		C	
XUPSD30P08000	4- 5	AA		C	
XUPSD30P10000	2- 21	AA		C	
XUPSF30P06000	2- 2	AA		C	
XWSSD40-10000	4- 23	AA		C	
XWSSD60-15000	4- 30	AA		C	
【0】					
0DUBŌDY000002	2- 16	AP		B	
0EMKT80020001	2- 4	AC		C	
0EMKT80220001	2- 9	AE		C	
0EMWK45001510	2- 8	AE		C	
0EMWK45531120	2- 6	AC		C	
0EMWK45531210	2- 11	AC		C	
0EMWK46466510	2- 5	AC		C	
0EMWK46466610	2- 10	AE		C	
0EMWK46475002	2- 7	AU	N	C	
0EMWK46530210	2- 3	AY		C	
0EMWK46530510	2- 14	AU		C	
0EMWK46530610	2- 101	AR		D	
0EMWK46531110	2- 18	AH		C	
0EMWK46531210	2- 20	AC		C	
0EMWK46536010	2- 12	AZ		C	